PHILADELPHIA, JANUARY 1, 1881.

ORIGINAL COMMUNICATIONS.

THE JUDICIOUS USE OF THE MICROSCOPE IN MEDICAL PRACTICE.

Read before the Philadelphia County Medical Society, October 27, 1880,

BY CARL SEILER, M.D.,

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THERE is no doubt that the microscope is an all-important help to the physician in his practice, if rightly used, and will frequently aid him in solving perplexing questions. But it is argued by most practitioners that it takes too much time to use the microscope, that the eyes suffer from the frequent use of the instrument, and that the work of preparing specimens for examination is too tedious and requires too many accessories. The object of this paper is to meet these objections and to show what can be done in a limited time and with limited means.

In the first place, a good instrument, from a reliable dealer, should be obtained, and should be fitted with a blue glass below the stage, so as to reduce the yellowness of artificial light, which, after all, is more convenient to use than daylight. Two objectives (an eight-tenth or one inch, and a one-quarter or one-fifth, of moderate angle) and two oculars (A and B) usually are included in the price to be paid for the instrument, and are sufficient for all purposes to which the practitioner will apply his instrument. A microtome and a good section-knife should also be purchased; and with these ends the list of apparatus. Of course, more objectives and accessories may be added to the instrument, but they are in most cases unnecessary, except, perhaps, a sub-stage condenser and a bull's-eye lens, which, if properly adjusted, produce an illumination which is not only agreeable to the eye and enhances the definition of the objectives, but also, what is all-important, does not tire the eye in the least; so that the microscope can be used for hours at a time without fatigue to the sense of sight. The fatigue of the eye and the injury to the sight, so often complained of as being caused by microscopical examinations, are in most cases due to the unconscious effort of the eye to see clearly an ill-defined and badly-illuminated object. The best test for illumination is a slide of blood upon which the corpuscles are spread in a thin layer. They will appear, when properly illuminated, as olive-colored disks with a depressed centre and a sharply-defined, intensely black margin; but if not properly illuminated their outline will be misty, and one or more rings will be noticed on the surface of the disks with a bright or dark spot in the centre, according to the focus at which they are viewed. A sub-stage condenser, however, which is not in the centre, so that its optical axis falls in a line with the optical axis of the objective, is worse than none at all; and it should therefore be mounted in such a manner that it can readily be centred, which makes it a rather expensive piece of apparatus. Without it excellent results can be obtained; and most of the discoveries in microscopy have been made with simple instruments handled skilfully.

The preparation of specimens for microscopical examination takes some time and skill, it is true, but not more than even a busy practitioner can afford, provided he is methodical and does not allow material to accumulate. A plan, as I shall describe presently, has been found to work admirably, and three hours a week have been found sufficient to build up one of the richest and best cabinets of pathological preparations in the country.

This plan is as follows. Four wide-mouthed jars holding about one-half pint should be filled three-quarters full of the following solutions: alcohol, forty-five per cent., in No. 1; alcohol, sixty per cent., in No. 2; alcohol, eighty per cent., in No. 3; and alcohol, ninety-five per cent., in No. 4. As the material is collected in the daily route, from operations or post-mortem examinations, each piece, which should not be larger than a cubic inch, is to be labelled, by fastening to it with a pin a piece of stiff writing-paper, upon which the necessary remarks are written with ink, and then to be dropped into jar No. 1. By expending fifteen minutes twice a week in transferring the pieces of material from one jar to the next one, it will be found that at the end of two weeks they will be ready for cutting. If, now, once a week two hours are set aside

for cutting sections, staining, and mounting of all the pieces of material found in jar No. 4, it will be seen that in two and a half hours a week specimens can be prepared, which may be examined during leisure moments.

In order to cut the sections the material is to be imbedded in a mixture of paraffin (two parts) and rendered mutton-tallow (one part), poured while warm into the well of the microtome. When cool and hard, the imbedding material is to be cut away in front and on either side of the specimen, but is left standing behind, when with the section-knife thin sections may be cut. These should then be placed in alcohol, and the thinnest and most complete of them selected for staining and mounting.*

In order to stain the sections they should be immersed for a few minutes in a solution of carmine prepared as follows:

Take of

Carmine, No. 40, gr. xv;
Borax, ℥j;
Water, f℥vss;
Alcohol (95 per cent.), f℥xj.

Mix and filter; then dissolve the crystals remaining on the filter-paper in eight fluidounces of distilled water, and evaporate in a water-bath to four fluidounces. This is called Woodward's Lilac Fluid, and may be purchased from most dealers in microscopical apparatus. From this carmine solution the sections are to be transferred to a solution of hydrochloric acid one part to alcohol (ninety-five per cent.) four parts, in which solution the stained sections should remain a few seconds, until their color has changed from a lilac to a light rose-red, and should then be washed in several changes of alcohol. Finally, they should remain for several minutes in strong alcohol (preferably Squibb's absolute alcohol), and then be immersed in oil of cloves or turpentine in order to make them transparent. After this the sections may be spread out upon a glass slip, covered with a thin cover-glass, and examined under the microscope. If found of sufficient value, they may be permanently mounted in balsam or dammar, labelled, and put away for future reference.

The spreading of the tissue upon the slide, as well as the wiping of the cover-glass, is a rather tedious process, and can be avoided by omitting the clearing of the specimen in oil of cloves, and by using a peculiarly-formed pair of forceps devised by myself some time ago. This may be done in the following manner. After the sections have been stained and have remained in strong alcohol for some time, a clean cover-glass is taken from the bottle with alcohol in which the covers are kept for use. Without wiping it, it is immersed in the alcohol containing the stained sections, being held horizontal by the mounting-forceps, and the section is floated upon it. The cover is then lifted out of the alcohol, with the section lying spread out upon its surface, and a drop of an alcoholic solution of Canada balsam is placed on the section. The cover with the section on it is then put aside, and the balsam is allowed to dry partially, which it will have done in a few hours. When thus partially dried, a drop of crude benzole is placed upon the surface of the balsam, and the cover is placed, with the balsam downward, upon a warm slide, and is gently pressed down.

The time occupied in cutting the section, staining, clearing, and mounting it, will not exceed five or ten minutes if the operator is at all familiar with the different steps; and such familiarity is very readily acquired. I do not want to convey the impression that by this method the best possible preparations of *all* tissues can be obtained, but I claim for it that the preparations will be fairly good, and will answer all purposes for which they are intended.

The examination of fluids, which is so necessary in medical practice, may also be made with little trouble on the part of the practitioner. He should provide himself with a few conical sherry-glasses, and pour the sample of urine or other fluid to be examined into one of them, labelling it with the name of the patient from whom obtained, and covering it with a piece of glass to keep out the dust. After a few hours a small portion of the sediment can be removed with a glass tube, placed upon a slide, and examined. Great care should, however, be exercised in keeping the glasses clean and emptying them immediately after the examination has been concluded.

In order to eliminate one of the most frequent sources of error in microscopical examinations, viz., the introduction of

* For description of the author's microtome, see Proceedings of Philadelphia County Medical Society, vol. i. p. 97, and vol. ii. p. 29.

extraneous matter under the cover-glass, both the glass slides and the covers should be carefully cleaned in the following manner. Place new slides, or such as have been used before, in a mixture of

Potass. bichromate, ℥ij;
Acid sulph. (commercial), f℥v;
Water, f℥xx;

and allow them to remain therein for a day or two; then wash them under a tap and stand them on end upon blotting-paper to dry.

Cover-glasses should also be placed in the above solution contained in a wide-mouthed bottle, and after they have been soaked for some time the acid solution is to be decanted off and clean water is to be poured on and off until all trace of the yellow color due to the bichromate of potassium has disappeared, when the bottle may be filled with strong alcohol, and the covers taken from it and wiped dry as they are needed.

The practitioner will find himself amply repaid for the trouble and time spent upon this work, not only by the pleasure he derives from it, but also by the knowledge he gains, and he will often be better able to understand the symptoms of a given case by bearing in mind the picture which his microscope showed him of the pathological changes in this or that organ.

1346 Spruce Street.

SOLUBLE COMPRESSED PELLETS —A NEW FORM OF REMEDIES FOR HYPODERMIC USE.

Read before the Philadelphia County Medical Society, October 27, 1880,

BY H. AUGUSTUS WILSON, M.D.,

Surgeon in Charge of the Eye and Ear Department of St. Mary's Hospital; Assistant, Medical Clinic, Jefferson College Hospital.

SOLUTIONS for hypodermic use have been very generally abandoned because the *penicillum*, which so soon forms, renders the use of medicines in this form uncertain, if not dangerous.

Because of the danger and uncertainty, as well as the inconvenience of carrying the medicines in solution, the profession has resorted, where practicable, to the use of powders, which are carried either in the hypodermic or pocket case.

It is as a substitute for the latter that I propose the new form of soluble compressed pellets, because of their convenient size and certainty of contents and action. I have confined my experiments to the salts of morphia because it is the drug most frequently used hypodermically, and because I felt confident that if I could succeed with this drug it would be but a simple matter to place in the same form other remedies, such as strychnia, arsenic, apomorphia, etc.

I would here say that Dr. Lawrence Wolff, the well-known pharmacist, has aided me very materially in perfecting the form and in the numerous experiments which have been made.

The result of our first attempt to obtain a soluble pill I now show you. Besides the morphia it contains one-quarter of a grain of white sugar; but the moisture necessary to roll the pills rendered them difficult to dissolve when required. Then the compressed form was tried with sugar; but the smarting, burning pain which immediately ensued led me to believe that the sugar was an irritant to the tissues, and, instead of aiding, really interfered with the process: therefore sodium chloride was substituted, which I found had not the disadvantages of sugar and possessed merits of its own.

The use of the sodium chloride will be apparent when I say that if morphia salts are compressed alone they become extremely hard and very slowly soluble. Hence the necessity of mixing thoroughly, before compression, some material which at the same time shall give increased bulk, be inert, and have a great affinity for water. The sodium chloride acts as a *disintegrator*, for upon coming in contact with water it readily dissolves and leaves the morphia in a fine state of subdivision, ready to be acted upon by water. The sodium chloride, instead of causing pain or irritation, seems really to assist in promoting absorption. To accomplish the solution usually requires not more than thirty seconds, and may be brought about as follows. The syringe is charged with about twenty minims of water, which is poured into a teaspoon or other convenient receptacle; the pellet, being dropped in, is crushed with the end of the syringe, to which the needle fits, and after all the lumps are broken the solution is drawn up and forced out three or four times, when usually the whole mass will be entirely dissolved and ready for use.

I have experimented with nearly all the salts of morphia with reference to their hypodermic use when combined with so-

dium chloride, and would express my belief that the muriate is the one to be chosen. It is the salt that the German practitioners have selected, as being less likely to change when kept for a considerable time; and as the acid is the same as that found in sodium chloride there is no chemical incompatibility. It is slightly less soluble than the sulphate; but this slight difference is counterbalanced by the greater certainty of immunity from change.

It is well known that the addition of atropia sulphate greatly increases the hypnotic and anodyne properties of the morphia salts and decreases the tendency to after-headache and constipation. I have, therefore, used this combination in all my experiments, and would suggest the following formula:

℞ Morphiæ hydrochloratis, gr. $\frac{1}{4}$, .015
Atropiæ sulphatis, gr. $\frac{1}{150}$, .0004
Sodii chloridi, gr. $\frac{1}{4}$, .015

Mix and make into compressed pill No. 1.

I claim that the advantages of this method over any other known are—

1st. The convenient size of the pellets.

2d. That they may be used by the mouth if desirable.

3d. Their certainty of contents and dose.

4th. Their certainty and rapidity of action.

Those who have used the hypodermic method, and have often experienced the disadvantages of solutions and the inconveniences of powders, from their increased bulk and from the difficulty of removing all the powder from the paper, will, I trust, accept this my suggestion, and from actual use decide whether it is or is not an improvement upon existing methods.

331 South Twelfth Street.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CLINICAL SERVICE OF R. J. LEVIS, M.D.

Reported by Chas. H. Willits, M.D.

RAILROAD CRUSH OF THE LEG TREATED BY AMPUTATION AT THE KNEE-JOINT—INTRA-CAPSULAR FRACTURE OF THE FEMUR—CASES OF FRACTURE OF THE RADIUS, WITH IMPORTANT REMARKS UPON THE PATHOLOGY AND TREATMENT.

GENTLEMEN,—I bring before you this morning a man whose leg has been crushed by the passage over it of the wheel of a railroad-car.

When he was admitted, he was suffering from marked symptoms of shock, which were treated with stimulants and external warmth until good reaction had taken place.

If you examine the leg, you will see that there is great comminution of the tibia and fibula and a good deal of laceration of the soft parts. There is but little warmth in the foot, showing slight vitality, with pulsation present in the anterior tibial artery, but absent in the posterior tibial. Large spiculæ of bone have been removed from the wound, and can be readily picked out now, together with masses of pulpified muscle.

I have consulted with my colleagues, and have decided that, owing to the great destruction of the soft parts, and the cutting off of the nervous and vascular supply to the foot and leg, the only chance the man has for his life is in the loss of the limb. This opinion is also sustained by the experience of this hospital, which bears testimony to the fact that limbs can rarely be saved after having been traversed by the wheels of a railroad-car.

It does not matter what kind of flap I make in this case, whether I cut antero-posteriorly, laterally, from within outwards by transfixion, or shape it from without inwards. The plan usually preferred in this house is the latter one, the objection to transfixion being the superabundant mass of muscle which is contained in the flap. However, whatever form you employ, this rule should always be carried out: to have enough muscle to cover the bone and enough integument to cover the muscle.

As it has been an undecided question in the minds of surgeons which is the safer operation,—through the knee-joint or at the upper part of the leg,—you should be governed in your choice of locality by the condition of the soft parts. In the case before us, that which would offer the best operation is a supra-condyloid amputation at the knee-joint, cutting off the ends of the condyles so as to give a stump free from prominences, suitable for the application of an artificial limb.

I now locate the knee-joint, and, under the carbolic spray, enter my knife a little above the internal condyle, sweep it around to a corresponding point on the opposite side, making a good-sized anterior flap; after dissecting up the flap and removing

from it the patella, I make a short posterior flap, cut the crucial ligaments of the joint, and remove the limb. The ends of the condyles are now to be rounded off with the saw, all sharp edges removed with the bone-forceps, the arteries ligated, and the flaps brought together with sutures. The stump will be dressed with lint soaked in carbolized oil.

I now bring before you a case in which there probably is an intracapsular fracture. It is interesting on account of the obscurity in diagnosis which is always present in these cases, and the bearing which the diagnosis has upon the prognosis.

Intracapsular fracture occurs in advanced life, rarely before sixty years of age, and is due mainly to two causes,—first, to the senile change in the structure of the bone, and, secondly, to the shape of the neck of the femur, which is less obliquely attached to the shaft of the bone than in earlier life.

The present symptoms are alteration in the shape of the hip, pain, very slight crepitus, inability to stand or walk, eversion of the foot, and shortening of the leg amounting to about three-quarters of an inch.

Fractures in this position are produced by the most trivial causes, as a slight slip or twist. In this case the patient says he simply slipped on the ice without falling.

The differential diagnosis between this condition and *extra*capsular fracture is very difficult, and is based upon the following points: the age of the patient; the trivial cause; the moderate amount of shortening,—usually from one-half to one inch; the slight evidences, if any, of crepitus; and the fact that the radius of the arc of rotation in which the trochanter moves is greater in *intra-* than in *extra-*capsular fractures.

Another point which will sometimes clear obscure cases of hip-injuries is based upon the fact that there is normally a limit to the backward movement of the thigh, due to the neck of the bone impinging on the edge of the acetabulum. In these fractures this check is removed: so that if a patient be placed upon his face and the thigh drawn backward it can be demonstrated by abnormal mobility.

In the treatment of intracapsular fractures of the neck of the femur we use the ordinary extension apparatus of adhesive straps and a weight, which is applied for fractures in other portions of the bone.

This is done, not to bring about union, but because it overcomes muscular movements and gives the patient great comfort, and also guards against any dangers from a mistaken diagnosis.

Of course we do not expect union to take place, as the head of the femur is a completely isolated bone floating in synovial fluid, and we have no means by which the fragments could be brought in close apposition.

There is one pathological specimen of a united intracapsular fracture in the museum; but this was doubtless due to the fact that the periosteal connections had not been completely separated.

The prognosis should be guarded, on account of the obscurity in the diagnosis.

The next cases are of a class which I endeavor to show you frequently in this clinic, namely, fracture of the radius.

This is the most common of all fractures, one which is most frequently followed by deformity, and whose pathology and mechanism are least known.

Attention was first called to this subject by Colles, of Dublin; he described a fracture, under the name of Colles's fracture, which he located about one and one-half inches above the lower end of the radius.

Many other prominent surgeons believe the fracture to be about one-half inch from the joint; but my opinion, drawn from some practical studies in the museums here and abroad, leads me to place it one-quarter inch from the lower end of the bone.

Barton, a former surgeon of this hospital, described a fracture of the radius on purely hypothetical grounds, for he had never seen such a case.

His description is as follows: "A chipping off of the posterior edge of the articular end of the bone," allowing the bones of the wrist to slip upwards and backwards.

He thought this would account for the deformity so common in these fractures; but this has never been verified by any cases that I have ever heard of or seen.

This fracture is *transverse*, and is caused by what I call transverse or cross-breaking strain. For example, a patient falls, the hands are thrown out, and the wrist is extended to nearly a right angle. This produces a leverage in a transverse direc-

tion, which is usually sufficient to break the bone.

There is a peculiar deformity, very uniform in these cases, due to the displacement, which is always upwards and backwards, carrying the wrist and hand with it.

The treatment consists in restoring the bone to its former position, and its maintenance there. This is done by extension and forced flexion, and the use of a properly adapted splint.

There are a great many splints devised for this purpose, but they nearly all fail in the very object desired, namely, the retention of the displaced fragments.

Suppose you use a flat splint, as Bond's: your broken fragments are not in a proper position, for you cannot treat a normally *curved* bone with a *flat, straight* splint.

To obviate this, a pad is usually placed in the splint to give it the proper curve, which is then good enough, but is difficult to keep always in position.

In the pistol-shaped splint of Dupuytren, the hand is inverted, thus throwing the convexity of the wrist against the fragments, pushing it still farther out of position. To obviate this difficulty I devised this moulded splint. It is made of copper, can be bent to fit any sized arm, and has a pair of pockets or pouches, into which fit the thenar and hypothenar eminences of the hand, thus effectually preventing displacement.

This splint was made after carefully measuring the normal curvature of the radius and allowing a little for the skin and subcutaneous tissues.

Patients find this exceedingly comfortable; and since I have used it I have had no further difficulty.

PENNSYLVANIA HOSPITAL.

CLINICAL SERVICE OF DR. WILLIAM HUNT.

Reported by HENRY M. WETHERILL, M.D.

RAILROAD CRUSH OF THE LEG TREATED WITHOUT AMPUTATION.

WILLIAM A. FINK, æt. 29, was admitted to the Pennsylvania Hospital, March 22, 1880. About thirty minutes prior to admission the patient was waiting at a railroad-crossing for a train of freight-cars to go by, which had, however, halted upon the crossing. As they stopped he sprang up between the cars and attempted to swing himself across, when the train started, and his left leg was caught and crushed between the bumpers in such a manner as to expose the entire anterior surface of the tibia, the opening being twelve and a half inches in length and four inches in breadth at its widest point. The intermuscular spaces in the soft parts of the leg were torn apart, and the anterior tibial artery was exposed for one and a half inches of its course. Neither tibia nor fibula was broken, and the exposed periosteum upon the tibia appeared uninjured. The entire leg very much bruised, but the main vessels were intact. Shock was not very profound, the patient reacting well in a few hours. Very little bleeding. Leg kept in shape by straps of adhesive plaster, dressed with lint saturated in carbolized oil, and placed in fracture-box. The following is from the ward note-book:

March 26.—Extensive sloughing of integument and bagging of pus in the calf. Strapping removed, all tension taken off, and leg placed in a bran-box with carbolized dressing. Temperature, 104°; pulse, 100; respiration, 22. Quinia gr. viij daily.

April 5.—Temperature, which has been high, shot up to 107.5° after a chill; twenty grains quinia given at one dose. In five hours afterwards, temperature 101°; profuse suppuration and sloughing of muscular tissue and integument. Whiskey f℥iv daily. Urine normal.

8th.—The inner half of the gastrocnemius muscle has sloughed, and was cut away with scissors.

17th.—Midway up the posterior aspect of the thigh is a large collection of pus which has burrowed up along the hamstring tendons. This was evacuated by incision, and a pint of pus escaped. Patient's general condition very unfavorable. Temperature, 103°; pulse, 120, weak.

26th.—After very free suppuration, the opening in the thigh is granulating from the bottom. All sloughing has ceased in the leg, and the large granulating surface looks healthy. No change in treatment. Temperature down to 99°; pulse, 96. Condition improving.

May 8.—Another collection of pus along the hamstring tendons evacuated, this being much smaller than the preceding one.

24th.—Temperature has not been above normal for some days. Stopped quinine and whiskey. Fracture-box is dispensed with, and twenty small grafts of skin from

inner side of arm planted upon surface of ulcer, which has become rather sluggish.

June 4.—These all failed to grow, but have stimulated the ulcer very much.

10th.—Twenty skin-grafts, also taken from his own arm, were planted upon the ulcer, which is closing in under stimulus of grafts.

15th.—These grafts have all died.

25th.—Ulcer not advancing, and granulations getting superabundant. Nitrate of silver applied, and fifteen skin-grafts, taken from another individual, scattered over surface of ulcer.

30th.—Eleven of the grafts have taken.

July 10.—Placed fifteen grafts from a fellow-patient upon ulcer, which is healing very rapidly.

20th.—Last grafts all took. The ulcer, which involved the entire front, sides, and a portion of the back of the leg, being almost girdling, has healed entirely under the use of skin-grafts, and he now walks well without support. Though there is much loss of muscular tissue, yet there is little deformity or loss of function. Although his own skin was repeatedly grafted upon the ulcer, the experiment was not successful in a single instance; but the ulcer was finally closed in by grafts taken from the arms of several other persons.

Discharged cured.

This case is an interesting one, viewed as an example of conservative surgery. Probably few cases ever looked more hopeless; and the excellent result was as little expected by the patient as it was by the attending surgeons.

This man recovered from a temperature of 107.5°,—a circumstance of itself rather remarkable. Did the large dose of quinia abate this several degrees in a few hours? No other means for its reduction were employed.

His temperature ranged between 100° and 104° for a little more than four weeks, during which time suppuration was very profuse, and extensive sloughing of integument and muscles occurred.

Pus-absorption was evinced, at that period when the large collection of pus was evacuated from the thigh, by the slight and almost daily rigors, by the shooting up and down of temperature, by the sallow, dirty color of his general surface, and by the peculiar, sweetish, sickening odor of his breath.

It would have taken unassisted nature very long to heal this enormous ulcer. Skin-grafts, though they may not live, never fail to stimulate a dry, unhealthy ulcer to the formation of laudable pus. It is a significant fact in this case that the patient's own skin-grafts merely stimulated the ulcer, but failed to grow in a single instance, showing the low condition of vitality present; while skin-grafts taken from the arms of healthy individuals grew readily, and soon entirely covered in this almost denuded member,—a circumstance not at all new in the writer's experience, and therefore probably one of which the experience of older surgeons affords numerous examples.

Summing up the features in this case, it might well be called a fair example of tenacity to life under trying circumstances.

1237 Arch Street.

TRANSLATIONS.

Vomiting in Phthisis.—Dr. Ferraud (*Le Concours Médical*, 1880, p. 524; from *L'Union Méd.*), in a lecture on this subject, divides the various kinds of vomiting observed in phthisis into three classes. 1. Mechanical vomiting, resulting from disturbance of the respiratory nerves, and to which a certain amount of gastric or pharyngeal irritation may be added. 2. Gastric vomiting, properly so called. 3. Central or bulbar vomiting. The first variety is that met with at the beginning of the disease. The stomach being full, efforts at coughing give rise to vomiting, and the matters vomited are purely alimentary. This form of vomiting is more apt to occur in the evening. It may be stopped by putting an end to the cough; but this is not so easy a matter. An indication is to prevent the accumulation of glutinous mucus in the pharynx: this may done by means of detersive and alkaline gargles. When ulcers are present in the throat, astringents, tannin, alum, etc., are called for. If these are not sufficient, tincture of iodine or nitrate of silver may be used. Inhalations of belladona or datura are often employed in this form of affection, and M. Woilez recommends that the pharynx be touched with a solution of bromine, one part to six.

Gastric vomiting belongs to the middle period of the disease. The matters vomited are not purely alimentary; they are rather chymous, and transformed by diges-

tion. The cause of this form of vomiting lies in functional trouble of the gastric mucous membrane. Gastric vomiting is of various kinds; it may occur from apepsia, by diminution of the peptic secretion, with increase in the epithelial secretion. It is to be combated by bitters and tonics, and, if necessary, vomitives. In place of vomitives, which we are not often able to prescribe for phthisical patients, calming topical remedies, as chloral, chloroform, ether, may be given, the latter being especially efficacious, as it is peptic as well as calmative. Pepsin and diastase also render good service in these cases. Gastric vomiting from morbid increase in the quantity of secretion is a late symptom. It is best combated by absorbents, as magnesia or charcoal. Astringent powders are still more efficacious in causing absorption of the products of secretion and modifying the secreting surface; rhatany and columbo may be mentioned among these. Powdered opium is also very serviceable in these conditions. Gastric vomiting from spasm of the stomach calls for the administration of narcotics. Opium is first here; then chloral, ether, valerian, chloroform: all may be employed at one time or another. Seltzer water is also useful in this form of vomiting, and atomization of ether against the epigastrium and the back may also be used. Gastric vomiting from special irritation, due either to a deposit of tubercle or to simple irritation, is to be combated by regimen, milk-diet, alkalies, or iodide of potassium in small doses. Plasters of opium, etc., may also be used here. Revulsion may be employed with advantage, in the form of painting with tincture of iodine, vesication, etc. Tincture of iodine may be given in small doses by the stomach, with a view to its modifying action.

Central or bulbar vomiting in phthisis ordinarily occurs at an advanced stage of the disease. It is due to encephalic, especially bulbar, irritation, dependent upon meningeal exudation by neoplastic products. It should be remembered that a vascular change, as bulbar anæmia, like that produced by syncope or migraine or seasickness, may give rise to this form of vomiting. The matters vomited are chiefly mucus and bile. Numerous therapeutic agents may here be brought into play. Chloral is most important, since it will even neutralize the action of apomorphia. Chloroform, which calms the brain and excites the action of the stomach, is doubly useful. Opium and morphia act in the same way, as also bromide of potassium, which may be given in the dose of fifteen to twenty grains at the time of eating. Electricity in various forms has been employed. Nitrite of amyl inhaled to the amount of a few drops has recently proved successful in controlling the cerebral vomiting of phthisis.

Artificial Production of the Signs of Defloration in Young Infants.—At a recent meeting of the Académie de Médecine (*La France Méd.*, 1880, p. 692) Prof. Fournier read a paper on this subject, of which the conclusions were as follows:

1. A sufficient number of cases are on record to authorize the statement that simulation of defloration in young children is at times attempted. The facts are as follows. Artificial production in young children of vulvar lesions, designed to simulate defloration, together with the attribution of these attacks to some individual whom it is in the interest of the accuser to injure.

2. Clinically, these lesions can betray their cause only by some local peculiarity. But this is only accidental, and we do not know of any clinical features by which vulvar inflammation produced by attempts at defloration can be distinguished from one artificially produced for purposes of simulation.

3. The detection of such simulations must depend less on medical symptoms than on the signs of attitude, response, hesitation, contradiction on the part of the child, antecedents of the simulator, various circumstances of the case, etc.

4. It is important for the general safety of the profession and for the dignity of the art to ferret out the ruse and discover the truth. It is not merely right, it is a duty, to confound a criminal accusation and to save the honor, the liberty, and the interests of an innocent person.

5. It is also important, for the same reasons, that the physician should not give a certificate without requisition from due authority. Such a certificate should be confined to the description of the lesions observed, without any estimate of their etiology.

6. Various motives actuate simulators: usually, however, desire of pecuniary gain is the cause.

7. Vulvar inflammations of different kinds usually serve as the basis of imputations of defloration, and these are ordinarily justified to appearance by the allegations of the unconscious or the assertions of the depraved pseudo victim.

TREATMENT OF PYROSIS.—M. Ory (*La France Méd.*, 1880, p. 700) prescribes, in connection with milk and vegetable diet, alkaline drinks. In addition, the following medicinal formula may be employed with advantage:

℞ Pulv. rhei, gr. clx;
Sodii bicarb., gr. xxx;
Syrupi simp., f℥iss;
Aq. menth. pip. ad f℥viij.—M.

Sig.—Tablespoonful twice to four times daily.

M. Ory finds the following powder very useful:

℞ Magnesii calcinat.,
Pulv. sacch. alb., āā ℥j;
Bismuthi subnitrat., ℥j;
Sodii bicarbonat., ℥ss.—M.

Fiat in chart. no. xl.

Sig.—One at the beginning of each meal.

Bouchardat regards the following powder as useful in pyrosis:

℞ Pulv. rhei, ℥iss;
Pulv. opii, gr. ij;
Pulv. magnesii calcinat., ℥iss.—M.

Fiat in chart. no. xv.

Sig.—One before dinner.

ERYSIPELAS.—Tillmanns (*Deutsche Chirurgie; Cbl. f. Chirurgie*, 1880, p. 699), like Virchow, objects to the separation of the deep propagating forms of cellulitis from erysipelas. All forms of cellulitis, even to the acute purulent œdema of Pirogoff, are to be regarded as true erysipelas. In Tillmanns's view, erysipelas originates essentially in the propagation of inflammation, and it is of no essential importance for this view whether the process occurs in the skin or the subcutaneous or subfascial tissues, or spreads through the whole thickness of a limb. Naturally, erysipelas of the mucous membranes and the associated erysipelatous wandering pneumonia are included; while Tillmanns does not accept the primary erysipelas of parenchymatous organs, as described by English authors. Erysipelas is essentially a traumatic, infectious disease. In accordance with the now almost universally accepted view, Tillmanns denies its spontaneous occurrence. Under this head must be taken into consideration the fact that the wounded spot is frequently overlooked or healed, or the erysipelas may first show itself at some distance from the locality of the wound, even in the mucous membranes. In addition, the absorption of the poison through solutions of continuity in the intestinal tract, the lungs, the uterus, as also often in puerperal fever, which is by so many regarded as true erysipelas, must be considered.

The contagiousness of erysipelas, which is so universally received in England and is much disputed in Germany, Tillmanns regards as absolutely proved by both clinical and experimental facts. On the other hand, he expresses himself very cautiously respecting the morphological peculiarities of the erysipelas poison and its relationship to bacteria. At any rate, bacteria cannot be invariably found in every case of erysipelas in the inflamed locality. In spite of staining according to Koch's method, and illumination with Abbé's apparatus, bacteria could not be found by Tillmanns in certain cases, even when bits of tissue were cut from the living patient. In other cases, however, they were found in large quantity. He thinks that there may be bacterial and non-bacterial erysipelas.

In conclusion, Tillmanns passes in review the long catalogue of vaunted remedies. He himself recommends iron, with alcohol as a stimulant and antipyretic. Something may be hoped for from the subcutaneous injection of carbolic acid about the border of the affected part, in the earliest stages of erysipelas. Finally, he alludes to the curative influence of erysipelas in certain tumors, phagedænic ulcers, etc., and suggests its inoculation, *in desperate cases*, from erysipelatous bullæ and blood.

PHLEGMONOUS PERIOSTITIS OF THE VERTEBRAL COLUMN.—An interesting case of this unusual affection was described by M. Poivier at a recent meeting of the Société Anatomique (*Le Progrès Médical*, 1880, p. 869). The patient, a boy of 14, was in the employ of a wine-merchant, and was exposed many times a day to sudden changes of temperature in descending into a damp cellar while in a heated condition. He did not get sufficient sleep, and, in addition, was growing very rapidly. When examined by Dr. Poivier, the patient had a pale, earthy complexion, with an expression of

suffering. He complained of severe pain in the lumbar region, causing him to cry out aloud if touched near this point. His skin was hot; pulse 100. He was constipated. Eight days previously, according to the patient's account, he had been working in the wine-cellar, when he suddenly experienced a sharp, piercing pain in the lumbar region. This gradually grew worse, until at the end of three days the boy had to take to his bed. From this time the fever came on, without chills, however. On examination, which had to be conducted under chloroform, on account of the severe pain which it caused, a swelling could be observed along the vertebral groove about the two last lumbar vertebræ and the sacrum. Deep fluctuation could be felt at one point, and an incision carried down through the periosteum gave exit to an ounce of pus. The vertebra was found bare. A drainage-tube was placed in position, and the patient placed upon nourishing food. His condition, however, became worse; the fever continued, but without chills; retention and incontinence of urine alternated, paraplegia ensued, and the patient sank and died at the end of four weeks from the beginning of the disease. The autopsy showed subperiosteal abscess with purulent infection, but without osseous change,—a true multilocular periostitis of the vertebral column.

Amyloid Degeneration.—Edward Bull (*Nordiskt Med. Arkiv; Cbl. f. Chir.*, 1880, p. 699), in a paper on Bright's disease, endeavors to show that amyloid degeneration is commoner than is generally supposed. He publishes a case of amyloid kidney, in which the time between the operation of the cause of the affection and the first appearance of albuminuria could be proved. This period was thirty hours. The patient, who was 22 years of age, fell ill of a severe phlegmon of the right lumbar region. At once, on November 12, 1878, an extensive abscess was opened, with antiseptic precautions. The urine had been examined regularly for albumen during some time previously, and on the day of the operation, with negative result. On the evening of November 13, however, traces of albumen were found, and this increased regularly in quantity. Death occurred on November 30. Post-mortem examination showed the left kidney pale, swollen, and with amyloid degeneration; the right kidney, which was in the neighborhood of the abscess, was atrophic, but showed no amyloid degeneration, nor did the liver or spleen. Since, then, says Bull, the entry of air to the purulent cavity was necessary to the amyloid degeneration, this cannot have occurred previously to the incision, this view being supported also by the fact that albumen was not in the urine, and also by the limited extent of the process. Bull finds his case pointing very strongly to the rapid development of amyloid degeneration, this agreeing with the fact that the kidneys, as a rule, are attacked by the degeneration at once, or at least very soon.

Organisms in the Viscera in Typhoid Fever.—Prof. C. J. Eberth, of Zurich (*Virchow's Archiv*, Bd. lxxxi. p. 58), has examined the lymphatic glands, spleen, characteristically affected parts of the intestine, and also the liver, kidneys, etc., with a view to discovering the character of the lower organisms said to be pathognomonic of typhoid fever. Of twenty-three cases examined, organisms were found in twelve,—twelve times in the lymphatic glands and six times in the spleen. They were also much more numerous in the lymphatics. Eberth does not regard these organisms as micrococci. They usually assume the rod-shape, and are about the size of the bacillæ found in decomposing blood, only with the difference that they usually take a narrow, oval, or stumpy spindle-shape rather than a cylindrical outline (pictures are given). They are slightly rounded at the end, not cut off sharp. In connection with these rods, small egg-shaped forms are met with, resembling micrococci. Undoubted spherococci were not observed. The peculiar delicate outline of these bodies serves to distinguish them from putrefaction bacillæ. They also contain one to three spore-like bodies, and do not stain so easily in methyl violet as the ordinary micrococci and bacillæ. Eberth gives several interesting facts regarding the comparative number of organisms found at different stages of typhoid, and concludes by asserting the probability that these stand in some relation to the essence of the disease.

Sudden Death from Pulmonary Embolism, after Reduction of a Luxation of the Femur, simulating Death by Chloroform.—A writer in the *Gazette Médicale de Strasburg* (cited by *Le Réveil*

Médical, 1880, p. 202) says we are too apt to place to the account of chloroform every sudden death occurring under narcosis. In a case reported, narcotism was produced by one-sixth grain of morphia and twenty drops of chloroform. The luxation having been reduced in six or seven minutes, the patient, a laborer of 50, suddenly blanched, pulse and respiration failed little by little, and death followed in a few minutes. The autopsy failed to reveal a single one of those symptoms which are usually found after death from chloroform narcosis. On the other hand, the greater branches of the pulmonary artery were almost completely obliterated by quite recent thrombi. The popliteal vein and the veins of the calf, which were decidedly dilated, contained thrombi of the same character. Adipose emboli were found in the finer branches of the pulmonary artery. The causes of death, as stated by the writer of the paper, were displacement of the thrombus of the popliteal vein by reposition and its embolism in the pulmonary artery, together with adipose embolism from injury to the soft parts in the operation. He thinks the surgeon should examine for thrombi, and when these are present must regard the luxation as irreducible.

PARALYSIS OF THE SPHINCTER ANI, FOLLOWING LABOR, SUCCESSFULLY TREATED BY MEANS OF INTERSTITIAL INJECTIONS OF ERGOTIN.—Dr. Larger (*Bull. Gén. de Thérap.*, October, 1880, p. 358) had under his care a young woman whom he safely delivered, by means of the forceps, without notable laceration of the perineum. He lost sight of her; but six months later she came to him complaining of an entire incontinence of fæces, dating from her accouchement. The urine was under normal control. On examination, the fourchette was found intact. The anus appeared to be firmly closed, but digital examination showed it easily permeable and giving absolutely no sensation of stricture. It was evidently a case of paralysis of the sphincter, caused by compression from the fœtal head. Dr. Larger prescribed cold rectal and anal douches and one or two suppositories daily, each composed of two scruples of butter of cacao and fifteen grains of Bonjean's ergotin. This treatment failing, interstitial injections into the sphincter ani of a syringeful of ten-per-cent. solution of ergotin were employed. The syringe containing fifteen minims of solution (in laurel-water), 1.6 grains of ergotin were thus injected at once. It was found less painful, later, to inject the amount at three points. Five injections made at intervals of two days sufficed for a perfect cure.

EXPERIMENTAL RESEARCHES ON THE BIOLOGICAL ACTION OF PICROTOXIN.—Prof. Chirone and Dr. Testa (*Jour. des Sci. Méd.*, 1880, p. 516; from *Ann. Univers. di Med. e Chir.*) have arrived at the following conclusions. 1. Picrotoxin may give rise to true attacks of epilepsy. 2. Picrotoxinic epilepsy manifests itself independently of the psycho-motor centres: it shows itself in a more intense form, indeed, when these centres have been removed by vivisection. 3. Picrotoxin first exerts its influence on the bulb and on the apparatus of conjunction between the cerebral centres and the spinal centres. In this respect it resembles strychnia and is opposed to cinchonidin. 4. Picrotoxin arouses the functional antagonism which exists between the psycho-motor centres of the bulb and the apparatus of conjunction. 5. Convulsions of the members caused by picrotoxin depend in the first place upon the influence which it exerts upon the bulb and which is propagated by the spinal cord; and, in the second place, upon direct action on the spinal centres. 6. (Omitted.) 7. Epilepsy of cerebral origin may be obtained artificially by cinchonidin, and epilepsy of spinal origin by picrotoxin,—the former occurring provided the psycho-motor centres are not removed, the latter becoming more intense if they have been removed.

TREATMENT OF ACUTE ARTICULAR RHEUMATISM BY SUBCUTANEOUS INJECTIONS OF ERGOTIN.—Dr. Chevallereau read, at a recent meeting of the Société Clinique de Paris (*La France Méd.*, 1880, p. 724), a communication on the use of ergot in acute articular rheumatism. Having been called to see a little girl suffering with prolapse of the rectum, in whom he desired to use hypodermic injections of ergotin, he found her so crippled with rheumatism that she could hardly be turned on her side to permit the injection to be made. Forty centigrammes of the *solution Yvon* of ergotin having been administered by the hypodermic syringe, next day the rectum continued in position, and, to the doctor's surprise, the rheumatism was much better, and the patient recovered without

further medication. A little later, being called in to see a young lady of twenty-three, who was suffering with severe acute articular rheumatism, confined to the joints of the right side, fifty grammes of the solution were injected, with the result of marked amelioration. The injection being repeated three days later, the patient was completely cured within ten days. This treatment was subsequently employed in a number of other cases, and always with success. The cases were not accompanied by high fever.

TREATMENT OF VIRULENT ULCERS.—At a recent meeting of the Société de Chirurgie (*Le Progrès Méd.*, 1880, p. 852) Dr. Marc Sée spoke of the resistance which certain virulent ulcers, as chancroids, chancres of the prepuce marked by symptomatic phimosis, chancroid buboes, and phagedænic ulcers, oppose to treatment, months often being required to effect a cure. Dr. Sée operates on these ulcers by scarification with the dermal curette: he scrapes away the pulpy covering of the ulcer, not ceasing until he reaches healthy tissue, and going into every hole and corner. If the case is one of phimosis, symptomatic of chancroid, Dr. Sée frees the prepuce by means of the thermo-cautery and operates as above. But the scraping must be done with the minutest care: the least particle left behind may cause the repullulation of the entire growth. After scraping, the surface thus laid bare is cauterized lightly with the thermo-cautery, after which antiseptic dressings are applied. The operation is painful, and should be done under anæsthetics, but the results are excellent. There is next to no inflammation: at the end of two or three days the ulcer is transformed into a simple wound, which heals with a linear cicatrix in two or three weeks.

A HITHERTO UNDESCRIBED NEMATODE FOUND IN THE HUMAN PERITONEUM.—Dr. Victor Babesiu describes, in *Virchow's Archiv* (1880, p. 158), the case of a woman dissected under his direction, in whose gastro-lienal ligament was found encapsuled a worm, fourteen centimetres in length and thirty-five millimetres in thickness, twisted into a spiral. The worm was of even diameter throughout, with pointed head and tail. It was marked by fine cross-lines, with somewhat deeper longitudinal markings. The oral opening was terminal, small, and round; anus almost terminal. Six rather distinct subcutaneous dark-brown oval papillæ. A small, indistinct, excretory opening, probably belonging to some excretory organ, near the mouth. Papillary terminal growths at the point of the short, straight tail; near this a gland. Two thick, twisted, uterine tubes, occupying the greater part of the corporal cavity, with immature, small, oval ova, without shells. A thin vaginal opening just behind the mouth. Dr. Babesiu calls his newly-found treasure *filaria peritonæi hominis*. Pictures of the worm are given.

GIANT-CELLS IN TUBERCLE.—At a recent meeting of the Société de Biologie (*Le Progrès Médical*, 1880, p. 866) Dr. Cornil communicated a new anatomical discovery relative to the giant-cells which have been studied by histologists during the past seven years. This relates to the impregnation of these cells by particles of carbon or pigmentary matter in the case of old or fibrous tuberculosis. When the tubercular granulations are transformed, we find, on examining them under the microscope, a mass of giant-cells impregnated with pigment. This pigment, which arises from carbonaceous particles or from the coloring-matter of the blood, gives great solidity to the diseased tissue, and, as a result, lengthens the life of the tuberculous patient.

PURGATIVE FOR CONSUMPTIVES. — Dr. Ferraud recommends the following prescription in the constipation of phthisis:

℞ Magnesiæ calcinat., ℥ss ad ℥j;
Mannæ, ℥j ad ℥ij.—M.

To be taken in a cup of tea.

When this is mixed with honey it makes an agreeable electuary:

℞ Mannæ, ℥j;
Magnesiæ calcinat., ℥ss;
Mellis, ℥j.—M.

This may be taken in tablespoonful doses in the morning.

VALUE OF AMMONIACAL SALTS IN DIABETES.—Dr. Paul Guttmann (*Bull. Gén. de Thérap.*, 1880, p. 431; from *Berliner Klin. Wochens.*), in a case of diabetes, gave for five days no medication. Quantity of sugar, 231.65 grammes. For thirty-one days administration of ammoniacal salts, 223.11 grammes of sugar daily. Then cessation of treatment for thirty-one days. Amount of sugar, 173.19 grammes per diem; thus showing that, so far from diminishing the amount of sugar in the urine, the salts of ammonia actually increase it.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JANUARY 1, 1881.

EDITORIAL.

MEDICAL LEGISLATION.

SOME weeks since, in an editorial, we called attention to the need of an efficient medical registration law in this State, and urged the Philadelphia County Medical Society to take the matter in hand. We were not aware at the time that there is a committee of the State Society which is endeavoring to procure the passage of a proper law. We still believe that a committee appointed by the County Society to co-operate with the State Society would, if properly selected, greatly increase the chances of any bill which may be offered at the coming session of the Legislature. The evidence as to the need of the enforcement of such a law needs no discussion, but it is not so indisputable that passage of the bill by the Legislature would be followed by enforcement. It is doubtless true, as asserted by Dr. S. E. Chaillé, of New Orleans, that in 1851 eleven States had such laws, and have since repealed them. The United States contains, however, a very different community from what it did in 1851. A stock argument against reform in medical education was that it had been tried, and failed because it was supported neither by the doctors nor by the laity. Yet the reform has been successful beyond the hopes of the most sanguine of those who struggled for it. It may be that the people are now sufficiently advanced to understand and profit by wisdom which fell years ago upon dull ears. Laws regulating the profession work successfully everywhere else in the world, and as human nature is, in the main, of similar character, the time must come when the proprieties and necessities of the present subject will be recognized. It is certainly still undecided whether that day has arrived; but the drift of the evidence at hand seems to show that the times are ripe.

In Illinois the registry law appears to be exercising a very good influence. In the first year the State Board of Health issued certificates to three thousand seven hundred and eighty-six graduates; to non-graduates based upon affidavits of ten or more years' practice in the State previous to July 1, 1877, and recommendations of reputable physicians, eight hundred and eighty-five; to non-graduates on examination, one hundred and thirty-six: total, four thousand eight hundred and seven. According to the last report of the board, in 1880 there are one thousand less practitioners of all kinds in the State than in 1877; one thousand seven hundred and fifty less unqualified practitioners: also, five hundred and fifty persons, who in 1877 were unqualified to practise, have since, by study in the schools, qualified themselves to practise in accordance with the law. The diplomas of two hundred and ten schools have been recognized, and four hundred fraudulent diplomas from Philadelphia and other cities refused. Certificates have been issued to five hundred and fifty midwives, and three hundred unqualified have ceased to practise.

The work thus accomplished is certainly a good one, and there are evidences that the Illinois Board of Health are intending to do more than they yet have done. We believe it has been judicially decided that the law under which they are acting gives them the sole right to decide which colleges shall be considered to be of such a character that their diplomas shall give the right to practise. We have seen a circular asking for an expression of opinion as to what requirements for graduation by a medical school are the least that the board can recognize. It may be that

some of our Eastern colleges will yet find that Illinois rejects their diplomas.

In Massachusetts, last winter, an attempt was made, by a branch of the American Social Science Association, to get a law passed which required all physicians entering upon the practice of medicine to pass an examination before a State examining board. Petitions were signed very numerously by men of the highest standing in the community having no direct connection with the medical profession, but numerous counter-petitions were also offered, and the proposed law was, after much discussion, rejected. It is plain that the older States are not as yet prepared for a stringent medical-license law; there are too many vested interests opposing, and the general public is not yet sufficiently informed: but the time will come.

We do believe that public opinion has matured sufficiently to render the obtaining of a simple registration act easy, and we believe also that a properly-constructed act would be obeyed. Fines and penalties are good in their way, but a more powerful lever in obtaining obedience would be a clause disallowing claims for medical services by unregistered physicians. If it were known that no professional bill could be collected in court by an unregistered physician, and that executors who paid such bills were personally liable to the heirs and legatees for the amount thus paid, we think the registry lists would soon be filled. Let us not attempt too much this winter, but do let us attempt to get a concise, carefully-drawn registration act. If the attempt be made with wisdom and energy, it must succeed.

CARE FOR INCURABLES.

WE are authorized by Dr. Pepper, chairman of the Finance Committee of the University Hospital, to state that Mr. Henry C. Gibson has offered to erect a new wing for incurables, in connection with the University Hospital, at a cost of about fifty thousand dollars. The plans are being drawn by Mr. Hewitt, the well-known architect, and will be submitted to the examination of a committee of experts in hospital construction, so as to insure the highest degree of perfection in all details. This munificent gift assures the immediate completion of this new department, the need of which has been so urgently felt.

It will have accommodation for about one hundred beds, and will thus afford an incalculable amount of relief to poor sufferers from chronic diseases who cannot afford suitable hospital treatment elsewhere.

The proceeds of the charity ball to be given in behalf of this new department of the University Hospital will now be devoted to its endowment fund, which already amounts to some eighty thousand dollars. Further contributions towards the endowment fund are, however, greatly needed, since it will require the interest on an investment of five hundred thousand dollars to support the entire number of free beds (one hundred) that will be contained in the new building.

This extension was needed because the present accommodations of the University Hospital do not admit of the thorough classification of the cases which will be practicable as soon as the new wing is occupied. It is designed that it shall be ready for patients by October 1, 1881.

It is earnestly to be hoped that the example thus set by Mr. Gibson, of giving during his lifetime a large sum of money to accomplish a definite and greatly-needed object, will soon be followed by others.

All taxes entailed upon charitable bequests are thus avoided, the exact accomplishment of the donor's wish and intentions is secured, and great enterprises are strengthened at most critical moments in the most conclusive manner. We note with pleasure, in this connection, the recent

munificent gift of Mr. Temple to the Academy of Fine Arts, and of Mr. I. W. Williamson to various institutions, and of Mr. John Welsh in founding the professorship in the University, which bears his honored name; but there is still ample opportunity and most urgent need for similar large gifts, especially to this latter institution (the University of Pennsylvania), to supply the advantages which are imperatively necessary for its proper expansion and full prosperity.

A library-building of spacious proportions, to contain the large collection of the University, is greatly needed; but even more importunate is the need for the endowment of professorships and scholarships, which would encourage science and learning and relieve the financial needs of this great educational institution.

DEATH DURING ETHERIZATION.

IN the *Cincinnati Lancet* of October 30 there is a long account of a death which recently took place during the administration of ether in that city, and in the *Boston Medical and Surgical Journal* for December 2 is an editorial discussion of the subject. It seems to us that our New England contemporary is correct in believing that the best chance was not given to the patient. The woman was exceedingly feeble, had been operated upon twice before, and, according to some statements, had septicæmia. When it was first noticed that anything was wrong, both respiratory movements and pulse had ceased. Surely there must have been some warning which a trained expectant eye might have noticed before things came to this pass. An irregular respiration, a pallid face, or a failing pulse ought to have given notice of the danger.

Then the means adopted for resuscitation are not above criticism. Artificial respiration was not maintained as steadily and persistently as one would expect; and the amount of stimulants given was simply extraordinary. One and a half pints of brandy were administered hypodermically and by the rectum during the two and one-half hours which the woman lived after the removal of the anæsthetic.

It must be recollected that the patient was dying largely, if not altogether, through narcotism of the respiratory centres. Alcohol is not a stimulant to these centres, but a paralyzant; and it was given to a narcotized woman in an amount sufficient to endanger fatal narcotism in a healthy woman. Ether and alcohol act almost exactly alike upon the nervous system; and to give alcohol in such a case is almost the same as giving more ether. The correct treatment is to be found in the hypodermic use of atropia as a respiratory stimulant, and, if a cardiac stimulant is also needed, the injection into a vein or under the skin of solution of ammonia and tincture of digitalis.

Of course, it is easy to criticise from a distance, and the position here taken may not to others seem correct; but we are not willing that the case under consideration should render the profession afraid of ether as an anæsthetic without its being clearly pointed out that it is far from certain that ether, and not alcohol, was the final cause of the death.

HOSPITAL STEWARDS, U.S.A.

SOME year or two since, we called attention to the present status of hospital stewards in the United States Army, with their unjustly low rank and compensation. Congress has hitherto afforded no relief to the just complaints of those of whom so much is required and to whom so little is given.

We trust that success will crown the efforts now being made for higher recognition of services. We see no reason why, if under the name of apothecary a man in the navy receives sixty dollars a

month, his compeer in the army for exactly similar services should be paid thirty dollars.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall of the College of Physicians, Philadelphia, October 27, 1880, Dr. Albert H. Smith, President of the Society, in the chair, at which Dr. Carl Seiler read a paper on the "Judicious Use of the Microscope in Medical Practice" (see page 193), and exhibited a mechanical microtome and several microscopic specimens. On motion, the thanks of the Society were tendered to Dr. Seiler for his paper.

Dr. E. O. Shakespeare said that he had been much interested in the paper, and thought that it discussed a matter of great importance to the student of medicine of the present day, and very practically useful to the busy practitioner, especially since the lecturer has shown that the preparations can be made in a very short space of time and in a very satisfactory manner. He felt that from his own experience he could endorse everything that had been said in the paper.

He wished to say a word in favor of the machine just exhibited to the Society for cutting sections, which he regarded as perhaps the best one of the kind ever devised for those who have not much experience in making sections with the knife, and also for making large sections of the brain and other organs, where large areas must be observed in order to trace the morbid process. He had seen beginners in microscopy make sections with this machine that were sufficiently thin for examination by high powers of the microscope.

Dr. Seiler said that all that he had intended to demonstrate was the feasibility of making sections and the use of the microscope by the busy practitioner. The cabinet which he mentioned was made by Professor Christopher Johnson, a busy practitioner of Baltimore, who has the best collection of any in the country, except Woodward's at Washington. Dr. Johnson follows the plan laid down in the paper exactly, and thinks that this method is the best one. It may seem expensive, on account of the alcohol, but really little is wasted. It is only necessary every two or three weeks to throw out the weakest solution and, degrading the rest, fill up No. 1 with ninety-five per cent. alcohol.

In concluding, the lecturer stated as an important point that the object in making microscopical preparations would not be attained unless the practitioner knew what he saw and what to look for. This requires hard study; and he was very glad to say that the different medical colleges all over the country are now introducing obligatory courses on histology and morbid anatomy. The student will therefore be in the future better able to carry on microscopical examinations with such practical hints as are to be found in the paper of the evening, and thus continue his microscopical work in conjunction with his daily practice.

Dr. H. A. Wilson read a paper on "A New Form of Remedies for Hypodermic Use" (see page 195).

Dr. M. O'Hara approved the suggestion, as he had heard it stated that powders of morphia lose their power after being carried for some time.

Dr. A. L. A. Toboldt suggested tartaric acid as an excipient, instead of sodium chloride, as it renders alkaloids more soluble.

Dr. Charles H. Thomas had been carrying morphia powders for many years, and never had any difficulty in keeping them, nor any evidence of failure. The method of Dr. Wilson, however, is an admirable one. The sodium chloride is not objectionable, as its solution is even less irritating to the tissues than pure water. This form has a marked advantage over the powders in point of solubility, especially if they have been kept for any length of time.

Dr. W. R. D. Blackwood had been in the habit of using morphia powders for hypodermic use for the last fifteen years, and was satisfied that morphia does not deteriorate at all. Moreover, in getting powders from a druggist, it is impossible to tell how long he has had the morphia on hand before dispensing it. In a case of intestinal colic he had made this experiment purposely, and could detect no difference whatever between fresh morphia and the old powders. His method is to carry morphia in one-quarter grain powders, which may be divided or increased as requisite. The syringe is filled with water, which is then ejected into a spoon, the powder dissolved and drawn again into the syringe and deposited beneath the skin. In this way the solution is definite in strength. No more is made than is necessary at the time, and penicillum is avoided. Other agents may be used in the same way. The pellets exhibited will doubtless fulfil a good purpose. During the last few years gelatin disks have appeared, which are valuable for their portability and accuracy in measuring the dose in hypodermic and ophthalmic medication.

Dr. John B. Roberts saw a special advantage in these pellets in hospital practice, where nurses who may be careless have to administer the remedy. The hypodermic syringes are often incorrectly graduated. If solutions are preferred, however, there should be no difficulty in preventing the fungous growth by adding tartaric acid to them; but the

present form has especial advantages in its convenience, easy solubility, and accuracy of dose.

Dr. John H. Packard said that for years he had been using powders of the pure alkaloid, instead of the sulphate of morphia. He never had any difficulty in dissolving them. He obtained them in quantities of fifty (half-grain papers), but never noticed any deterioration or change, even after keeping them for years. He was satisfied that there is much inaccuracy in graduating syringes. He preferred the powders, using hot water, and taking the whole, a half, or any part of one of the papers, according to the amount he desired to give, discharging the water upon the powder, and then drawing it up, performing this several times. He has had no difficulty in obtaining a clear solution. He does not, however, use the hypodermic syringe as frequently at present as he formerly did, on account of the strong objections raised against it by persons whose opinion he respects. The disagreeable effects of morphia can generally be overcome by taking a cup of strong coffee.

Dr. Charles B. Nancrede spoke of a case that was very much affected by opium, where the headache and general distress were relieved by half a drachm of the fluid extract of ergot.

Dr. H. A. Wilson, in closing the debate, said that he would like these hypodermic pellets to be submitted to actual trial by the profession, in order to determine whether they are of any real value. He had experimented with different excipients upon his own person, and had found sugar and other substances are slightly irritating, but table-salt is not. The pills are accurately weighed and lightly compressed by Mr. Wolff, who had agreed to furnish them at a cost not greater than that of the powders.

For keeping several varieties in the hypodermic pocket-case, he recommended short tubes with a diaphragm in their middle and containing a different kind in each end.

On motion, a vote of thanks was tendered to Dr. Wilson for his interesting communication.

SANGUIS BOVINIS EXSICCATUS.

Dr. William H. Pancoast presented a specimen of a new form of condensed nourishment, consisting of dried bullock's-blood, prepared at the Jersey City stock-yards, under the supervision of Dr. F. E. Stewart, for Messrs. Parke, Davis & Co. This substance is given in place of beef-tea, and similar articles for the sick, mixed simply with water (ʒj to ℥j), or, better, with brandy and glycerin. It may be given in nutrient enemata as well as by the mouth.

Dr. Stewart, being present, was, on motion, invited to explain the process of preparing the blood. He said that dried blood had been used extensively in New York, and was now under trial at the Blockley Hospital, Philadelphia. The process of preparing the blood is very simple. The fresh blood is obtained by bleeding the animal to death, the fibrin is rapidly removed, and the rest of the blood is exposed in shallow vessels to a temperature not above 110° to prevent coagulation of the albumen and its devitalization by excessive heat. The dried blood is afterwards coarsely broken up and packed in air-tight cans. It is important that the animals should be bled to death, for if they die of apnœa the product will be less fit for medical purposes. He commended particularly the form of administration in an elixir (ʒij in ℥vj).

The thanks of the Society were tendered to Dr. Stewart for his explanation. F. W.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, NOVEMBER 11, 1880.

THE VICE-PRESIDENT, Dr. JAMES TYSON, in the chair.

Cancer of the lower portion of the œsophagus and the stomach. Presented by Dr. E. T. BRUEN.

THE specimen affords an example of cancer of the œsophagus at its termination in the stomach, and the growth has involved the tissue of the cardiac end of the stomach, along its greater curvature more especially. The mucous membrane of the stomach is still intact, although it bulges inward from the presence of the growth, the masses of which can be felt as large as though two or three walnuts were encased beneath its folds. The spleen is found tightly bound to the stomach, the left lobe of the liver as well, and the lung was also fixed. This is shown by the fragments here exhibited. Almost the natural lumen of the œsophagus is preserved. I could introduce my finger with ease before I opened the tube. This I had inferred before death, because I could introduce a fair-sized bougie into the stomach, and this was several times accomplished during life.

All the other tissues of the body were found at the autopsy to be normal. The interesting clinical facts connected with this case can be briefly stated as follows:

1st. There was no evidence of previous cancer in the family history of the patient.

2d. Although dyspepsia and failing strength had been noticed for six months before the case came under my care, yet all this time the patient was not prevented from attending to her occupation as washerwoman, and she did not apply for treatment till about six weeks before her death, when obstinate, uncontrollable vomiting rendered her unable to work, and she entered the hospital. The material vomited never contained blood, and we now recognize that there is no ulceration of the mucous membrane of the stomach.

3d. The only dulness was furnished in the normal splenic area, and the tumor was situated so high in the left hypochondrium that palpation was equally futile: so no assistance was furnished by physical examination.

4th. Much flesh was lost during the six weeks of vomiting; but little had been lost before, although the patient admitted that she was conscious of failing strength for the six months previous to admission to the house.

5th. The age of the patient was 58 years.

6th. There was some albumen in the urine, and its specific gravity was low (1009), and the question, "Can the vomiting be symptomatic of deficient renal activity due to cirrhotic changes?" was entertained. The hypothesis was, however, not supported by any hypertrophy of the heart or evidence of increased vascular tension.

7th. In forming a diagnosis in the absence of positive symptoms, I could only infer that cancer existed.

8th. The adhesions presented by this specimen are of interest in studying cases of cancer of the stomach. I have now a case in my wards in which adhesions have apparently been formed between the pyloric end of the stomach and the under surface of the liver. Thus a possibility of cancer of the left lobe of the liver is simulated. In such a case the pylorus, weighted by the growth, is sometimes quite movable, and can thus be distinguished from a cancer of the liver, and yet sometimes the adhesions may prevent much movement: so in such a case it can cause pressure on the aorta, and murmur which is influenced by position.

I should like to pursue this subject, but believe that this is not in conformity with the scope of this Society.

Dr. TYSON said that the case was interesting to him chiefly from the fact that the carcinomatous growth projected outwards, instead of encroaching upon the lumen of the stomach, as is usually the case.

Dr. HENRY remarked that the case just reported opened up a very nice question in diagnosis. It will be recalled that the urine was of low specific gravity—1009—and contained albumen, but its diurnal amount was not mentioned. This abnormal condition of the urine coexisting with obstinate vomiting, it was natural, in the absence of *signs* of gastric disease, to attribute the condition of the patient to a diseased state of the kidneys; but Dr. Bruen was led, chiefly, he believed, from the extremely obstinate character of the vomiting, to suspect, and, as Dr. Henry understood him, to diagnosticate, a carcinoma of the cardiac end of the stomach. Bright's disease had been excluded on account of the absence of cardiac hypertrophy and increased vascular tension. Cardiac hypertrophy, although the rule in cases of contracted kidney, is by no means invariably met with. For its development a good state of nutrition is essential. This fact was illustrated by a specimen of extreme cirrhotic atrophy of the kidney, associated with phthisis, recently presented by Dr. Henry to the Society. There was no cardiac hypertrophy, the low state of the patient's nutrition forbidding this compensatory action on the part of nature. On the contrary, the heart was somewhat below the average normal size, of flabby consistence, and somewhat fatty. Dr. Henry did not recollect whether Dr. Bruen had made any particular mention of the post-mortem appearances of the heart and kidneys in the case just reported.

In reply to Dr. Henry, Dr. BRUEN said that the statement that the other tissues and organs were normal had been overlooked: this of course included the condition of the cardiac muscle. Dr. Bruen did not think Dr. Henry's case of phthisis with granular kidney, yet without cardiac hypertrophy, a parallel case with that under discussion. In his case the general nutrition had been good up to within a few weeks of the death of the patient, while Dr. Henry's was a case of chronic wasting disease.

Hypertrophy of the heart with accentuation of the sounds, especially the second, is recognized by Dickinson and others as most frequently associated with renal fibrosis. In his clinical experience these facts were cardinal points of diagnosis. If, as occasionally happens, the patient suffers from wasting disease, these conditions may not be present, but even the dilatation of the heart is probable. He considered his point well taken,—viz., that the absence of accentuated sounds and cardiac hypertrophy excluded renal alteration, for the wasting had been rapid, not chronic.

Cancerous tumor of the mediastinal glands and of the lung. Presented by Dr. EDWARD T. BRUEN.

I cannot present this specimen with the clinical study which its importance demands, because the patient died the day after I resumed charge of my wards in Blockley, and was almost moribund when I saw him. The immediate cause of death seemed to be dyspnœa from the presence of a large right-sided pleural effusion. Tapping of the chest was accomplished, and three pints of liquid were withdrawn, but the patient died a few hours afterwards.

Post-mortem.—The body was fairly nourished. Rigor mortis marked. On removing the sternum, the large mass now exhibited was found filling the entire mediastinum and involving the cervical glands. The cervical glands presented a mass as large as a small bunch of grapes, reaching up some distance above the clavicles on both sides. No glandular enlargements were noted elsewhere. The costal pleura was healthy, but many nodules were scattered through the right lung and pulmonary pleura. Elsewhere all the tissues and organs were notably normal. I think during

life the dulness over the mediastinum, contrasted with the flatness over the effusion, and the presence of the enlarged glands in the neck, would have been helpful aids to establish the diagnosis. One of the earliest symptoms in these cases has been pain, sometimes localized, sometimes radiating down the chest or down the arms. This is a really fundamental symptom, and is useful before percussion can be employed. The difficulty confronted in some cases is to distinguish this pain from that caused by commencing aneurism before the aneurism is attested by a murmur. This suggestion applies especially to that form of aneurism known as dilatation of the aorta. The effusion must have taken place in consequence of inflammation of the pleura, since many shreds of lymph were found floating in the fluid; but the pressure from these enlarged glands might have produced the same effect. I have under observation a case of adenia, or enlargement of the bronchial and cervical glands, without evidence of corpuscular blood-change or scrofula or syphilis, occurring in a young man about thirty years of age. In this case, although the interference with the intrathoracic circulation has caused a general enlargement of the superficial veins of the body, there is no pleural effusion. I think that the pleural effusions in cases of mediastinal cancer mean oftenest a secondary cancer of the pleuræ. A microscopic examination of this growth showed its structure to be that of a carcinoma of the medullary variety. A section prepared by Dr. Formad is ready for your inspection.

Aneurism of the innominate artery. Presented by Dr. J. H. MUSSER.

As Medical Registrar at the Hospital of the University, I had the opportunity of observing the patient from whom the specimens were taken, and through the courtesy of Prof. Pepper I am allowed to present them to you.

Admitted to the hospital August 1, 1880, the patient was 34 years of age, a native of Wales, and a resident of Dauphin county, Pennsylvania. For twelve years past his occupation has been that of a miner, working hard and exposed to all its hardships. A constantly moderate drinker, at times he would spree. Always used tobacco moderately. Eleven years ago had a sore on the penis, said to be a chancre. A year afterwards he had subacute rheumatism, lasting a year. No other symptoms of syphilis. Save an attack of pneumonia, he has been perfectly healthy. Family history, so far as can be ascertained, good.

While working in the mines when they were on fire, in January, 1879, he caught cold, and thenceforth suffered from shortness of breath, stiffness in the neck, and a "twitching" sensation in the larynx; the latter symptom occurring at intervals, the others being constant, though variable in degree. In January, 1880, he applied to a physician for treatment. At that time he was said to have bronchitis and chronic laryngitis. Early in July he had an attack of what was said to be œdema of the larynx. A few days afterwards a "lump" broke in the throat, with the discharge of purulent matter. Since then he has expectorated blood. After the breaking of the "lump" the dyspnœa was relieved. During the year he has lost flesh and strength. His appetite has been poor, and he has had night-sweats. At present he is a moderately stout man, with a large frame, weighing one hundred and sixty-two pounds, face slightly flushed, not anæmic, skin warm and moist, fingers not clubbed, dark eyes, large eyelashes, hair in abundance, dark, teeth good, natural countenance, tongue coated and flabby, pharynx slightly congested, no blood on it or point of hemorrhage, tonsils and half-arches normal, no dyspeptic symptoms, bowels regular.

Laryngoscopic examination by Dr. McCracken, in charge of throat department, revealed only slight infiltration of the tissues about the glottis, absence of paralysis of either vocal cord, in the trachea at the right a mass of blood. Did not notice any occlusion of the tube. At the larynx there is a hoarse, coarse inspiratory sound; the sound is transmitted all over the thorax, so that it is almost impossible to hear the respiratory murmur. The percussion-note at the left apex was a little higher-pitched than normal. Expansion of the apex and of the whole lung was poor. Constant cough; continuous expectoration of bright arterial blood. Pulse 70, heart normal, special senses and mental faculties unimpaired.

Further note.—For three days the hemorrhage continued; on the third day death resulted from a sudden enormous hemorrhage.

Post-mortem.—All the tissues and organs, except the lungs, exsanguious. The organs were healthy. The lungs, air-cells, bronchials, and bronchii filled with arterial blood. On opening the thorax, the heart and lungs were in their normal positions. The inner sides of sternum and ribs were not pressed upon. The innominate veins were normal in position and size. The trachea was not noticeably deflected. The ascending and transverse portions of the aorta were dilated, the upper part being more expanded. The innominate artery was dilated, the dilated mouth being continuous with the dilated aorta. The expansion of the innominate was not uniform; anteriorly there were one or two sacs, posteriorly a large sac pressed against, became united to and ulcerated into the trachea. The right carotid arose from the common expansion of the aorta and innominate, the subclavian one and a half inches from the carotid, above and at the right of the mass. The dilated portions of the aorta were atheromatous. Within the aneurism, completely filling it, was a large, moderately firm, pale-red clot;

left ventricle of heart slightly hypertrophied; valves normal. I should have mentioned that the pneumogastric nerve was seemingly much pressed upon, as the cords of the plexus were quite flattened where they passed over the mass. The recurrent laryngeal was not pressed on.

The diagnosis was not made before death. It was thought to be incipient phthisis with tumor. I thought there must be something causing pressure. I had no opportunity for a second examination. Had more careful percussion been performed, the dilated aorta and the aneurism could probably have been defined. Comparison of the radial pulses might have given a clue. There was no projection, no pulsation, neither thrill nor murmur, nor were there any external evidences of pressure within.

The continuous dyspnœa, persistent stiffness of the neck at the root, with soreness, and the "twitching" sensation, are worthy of note. The July attack was due to œdema probably, and the "breaking of the lump" to the completion of the ulceration, hemorrhage being prevented by the protruding clot.

I am positive that the circulation of the right arm was not interfered with nor the pulse much altered, as it was at that arm I noted the pulse.

Dr. BRUEN had for some time past in the study of aneurism taken as fundamental evidence for its diagnosis two series of facts,—viz., 1st, the sequence of disease of the arterial coats upon some prior cause capable of producing inflammation of the arterial coats; 2d, symptoms of pressure. The pressure-symptoms seem to have been overlooked in this case. It was indeed true that other diseases besides aneurism might give similar pressure-symptoms; but as a rule they could be differentiated easily. He knew of a case in which an erroneous diagnosis of dilated aorta had been made, when fifteen months afterwards mediastinal cancer was undoubted; cases of this sort are exceptional.

Auscultation and palpation were not as important, in his estimation, as the above points, for a deposition of laminated clot might prevent murmur, thrill, or pulsation. In proof of this, he would recall to the remembrance of the Society a case reported by him to this Society about one year ago,* in which case multiple aneurisms had been found after death, completely filled with laminated clot, so that no blood could enter them. During life, murmurs could be elicited only by pressing the most superficial tumors upon the aorta, thus obstructing its lumen. In these cases the pressure-symptoms, aided by percussion, were most interesting.

Two cases of abdominal tumor which he had lately seen presented the same symptoms as regards murmur and palpation signs of tumor. In one there was a specific history, and a peculiar pain relieved by a position of the body prone upon the face. In the other there is no history of syphilis, alcoholism, or renal disease, nor is there the significant pain relieved by change of posture.

In one of these cases the diagnosis was verified by autopsy, revealing rupture of an aneurismal sac; the other, Dr. Bruen believed, will be demonstrated at an autopsy to be carcinoma, probably of the stomach, and the diagnosis was made by attention to his cardinal points. In abdominal carcinoma adhesions might form, which might so fix the tumor as to cause a murmur not affected by change of position.

Dr. MUSSER, in reply to Dr. Bruen, called attention to the fact that he had stated in his notes that perhaps more careful percussion would have detected the tumor and the dilated vessel. Neither, however, encroached upon the lung, as that organ was most carefully examined. The anterior view of the tumor was small, dilatation of the aorta not very great, so that the area of dulness would certainly have been small. Pressure-symptoms were noted, but the sudden death of the patient prevented the cause from being investigated fully. The stridulous respiration, its seat loudest in the larynx, the paroxysmal attacks of dyspnœa, finally growing constant, were due, probably, to the stricture of the trachea.† Œdema of the glottis might have been produced by obstruction to the venous return from pressure. The flattened condition of the right pneumogastric nerve should have caused some more constant symptoms. The paroxysms of dyspnœa might have been thus produced.

Dr. BRUEN asked if the dyspnœa was spasmodic or constant.

Dr. MUSSER replied that at first it was spasmodic, but latterly it was very slight, but constant.

Dr. BRUEN referred to a case of spasmodic dyspnœa resembling asthma, which was due to aneurism. He had already this evening referred to this case. The aneurismal growth had compressed the pneumogastrics and trachea, and produced the same whistling respiration noted in Dr. Musser's case, and horrible asthmatic seizures, although there was always some dyspnœa. In Dr. Musser's case these symptoms would probably have become more marked as the tumor enlarged.

Dr. B. also wished the Society to note that he had also read before them a paper (afterwards published in the *Medical Times* of May last) on mitral obstruction, in which he had claimed that murmurs indicative of mitral obstruction were heard with maximum intensity over the auricle, following the or-

* Meeting of October 23, 1879; also Medical Times for October 11 and 25, 1879.

† Ziemssen's Cyc., art. Occlusion of Trachea.

dinary law, that murmurs are heard with maximum intensity at that point where the cavity in which they are produced approaches closest the surface of the chest. This, with accentuation of the second sound at the pulmonary artery and enlargement of the auricle, often helps to disentangle a confused murmur.

Dr. MUSSER thought these symptoms were due to the pressure on the trachea, especially as the same dyspnœa, early in July, was relieved by the "breaking of the lump," which had doubtless lessened the tension of the aneurismal sac. He would also call attention to the constant soreness and stiffness at the root of the neck.

Dr. TYSON asked if any disease of the lungs had been detected post mortem.

Dr. MUSSER replied that none had been observed.

Epithelioma of the foot. Exhibited by Dr. H. F. FORMAD.

This specimen is taken from the dorsum of a foot removed by Professor Agnew last winter in the University Hospital surgical clinic. The following history was obtained through the kindness of J. W. Worrell, student of medicine at the University:

The patient, a robust young man of 27 years, acquired fourteen years ago a compound fracture of the os calcis, the foot being caught between the wheels of a threshing-machine. The patient recovered from the injury with a stiff ankle-joint, but at the end of six months the cicatrix began to slough, in which condition it remained for six and a half years; then it again healed up entirely. The cicatrix, which had a very scaly appearance, remained, however, closed but one month; then it opened by one single long fissure or break, and has remained an open superficial ulcer ever since. For five years the edges of the ulcer remained smooth, then they became rough. The ulcer used to increase very slowly in size, more rapidly during the last six months. There has always been a very offensive discharge; it has always been painful and itching; never bleeding of itself, but bleeding readily on the slightest injury. At the time when the patient came to the University Hospital clinic the ulcer was covering an area of twenty square inches, in its longer diameter reaching around the dorsum of the foot, from the external to the internal malleolus. The diagnosis was, as in all such cases, that of indolent ulcer.

Microscopic examination of sections taken from all parts of the ulcer revealed it to be a typical squamous epithelioma crowded with characteristic pearly bodies.

Dr. J. H. PACKARD agreed with Dr. Formad in thinking that certain indolent ulcers were in reality epitheliomatous, and instanced a case in point.

Dr. FORMAD said that he should like to call attention to the youth of the patient from whom this specimen had been removed, for the books generally state the contrary. In his experience he had had several opportunities of examining similar ulcer-like epitheliomata removed from comparatively young subjects.

Dr. NANCREDE said that some five years ago he had presented to the Society for Dr. J. Ashhurst, Jr., a specimen of pigmented papilloma of the groin, which showed the commencing invasion of the subcutaneous tissue by epithelial elements. The patient from whom it was removed was about 18 years of age, and she had remained perfectly free from the disease up to the present time, he believed, owing to the early and free removal of the growth. He also cited a case of so-called "Marjolin's ulcer," giving a detailed account of the microscopical appearances.

Dr. TYSON agreed with the views propounded by Dr. Nancrede, and said that the evident inference to be drawn from the facts related this evening was that early and radical surgical intervention should be resorted to in such cases.

Dr. BRUEN said that he knew of numerous cases of ulcers which had proved intractable for many years,—perhaps twenty,—and which yet showed no evidence of epitheliomatous change.

Dr. FORMAD could not admit that the base of an ulcer, consisting as it does of mere granulation tissue, could become epitheliomatous. The indurated margins of the ulcer, containing epithelial elements, could, however, readily undergo this change.

Dr. TYSON said that Dr. Formad's remarks really opened up the much-vexed question of epithelial new formations. Where a new islet of cicatrization appears in the centre of a sore, the same difficulty arises as to the explanation of its genesis.

Dr. PACKARD said that his remarks had reference to mistakes in diagnosis.

Dr. SHAKESPEARE remarked that he had lately been asked to examine a fragment removed from an obstinate chronic fungous ulcer on an old woman's leg, who had been for many years an inmate of Blockley. Under the microscope, sections of this showed plainly its epitheliomatous nature.

Mitral, aortic, and tricuspid valvular disease; red atrophy of the liver; cirrhosis of the kidneys and pancreas. Presented by Dr. J. H. MUSSER.

The specimens I present are from a patient who died in the University Hospital. The history is as follows:

Maggie M., white, æt. 26, single; born in Dublin; but three weeks in this country; domestic. Father and mother living; six brothers and sisters dead, cause not known by patient. No cancer or phthisis in the family to the patient's knowledge. Five years ago had acute rheumatism; no other illness.

September 22 of this year she was suddenly

seized with vomiting and slight fever. In two days the vomiting was replaced by pain in the xiphoid cartilage. On the 27th she became jaundiced. The above is the patient's story of her condition previous to admission. I may say she drank daily of ale and porter, occasionally to excess.

October 2, her condition was as follows: emaciated and anæmic; skin and conjunctivæ jaundiced. Face dusky, lips blue, countenance anxious; hands and feet blue and cold, fingers clubbed; temperature 95°; mind dull. Tongue dry, heavily coated with a dark fur; thirst; no vomiting; loss of appetite; pain and tenderness upon pressure on epigastrium. Liver dulness in mammary line begins at fifth rib and extends to the margin of the ribs. In median line, dulness extends to two inches below xiphoid cartilage. Slight diarrhœa, stools light yellow. Breathing hurried; lungs healthy; cardiac impulse in second, third, and fourth interspaces, one, one and a half, and two inches, respectively, inside the nipple-line, and in the fifth interspace one-half inch outside nipple. Palpation shows same as inspection, and in addition an epigastric impulse is noted, and at the apex a slight thrill. Cardiac dulness begins at second interspace above. The right border corresponds with the right edge of the sternum, the left with the left limit of the impulse-area. Heart-sounds extremely tumultuous and difficult to define. The first was somewhat booming, with a murmur over the mitral area. At the aortic cartilage a feeble systolic sound, possibly transmitted; pulse very small, weak, irregular, about 160. Urine: reaction, acid; specific gravity, 1021; albumen present; sugar absent; sediment, few granular and numerous hyaline casts, some of them containing red blood-corpuscles; fatty epithelial cells from the bladder and urethra, some of them stained yellow; few pus-cells; irregular granular masses of brown pigment and broken-down red blood-cells.

October 3 and 4, condition about the same. Later, the night of the 4th, she had an attack of dyspnœa, and of severe pain over the sternum and in the right side. There was dulness at the base of the right lung, and subcrepitant râles. Digitalis and carb. ammonia, with dry cups, gave some relief. At 4 A.M. she almost went into collapse; her extremities were cold and blue, face dusky; pulse imperceptible at wrist; heart very rapid, weak, and irregular; subcrepitant râles and dulness at the base of left lung, also. Internal and external stimulation caused relief, so that in the morning she had only slight pain and oppressed breathing; extremities were warmer, face more natural, although jaundice seemed increased; pulse was 150, stronger and more regular. Congestion of lungs posteriorly continued; slight diarrhœa, pale stools; no vomiting.

October 5, 4 A.M., another attack of dyspnœa. At the morning visit the pulse was improved slightly, as was also the dyspnœa; jaundice slightly increased. In the afternoon she became dull, not answering questions readily; heart as usual; no dyspnœa; urine not passed so abundantly as in health.

October 6, weak; breathing hurried; effusion in both pleuræ; heart's action very rapid and feeble, irregular; pulse not felt. Death at 10 A.M.

Dr. FORMAD made the following report of the post-mortem, made by Dr. Hughes, three and a half hours after death:

External appearance: whole body jaundiced; large yellow patches about the head, especially; sclerotic coats of eyes of a deep-yellow color; pupils dilated; abdomen distended slightly; rigor mortis well marked.

Thorax.—Pericardium contained about six ounces of a straw-colored fluid; about two pints of a similar fluid in each pleural cavity. Firm lateral and diaphragmatic pleural adhesions of left lung. *Lungs*, congested; no œdema; crepitant throughout. *Heart* somewhat enlarged, weight fourteen ounces; muscle dark; coronary vessels engorged. Pulmonary artery and valves normal. Tricuspid valve thickened and rigid, orifice contracted. Right auricle and ventricle slightly dilated and filled with dark-red clots and a chicken-fat clot. Aortic orifice was much narrowed by the stiff, retracted, partly calcified leaflets. The valves could not have effected a sufficient closure. Mitral valve-leaflets diseased, permitting regurgitation; the orifice was narrowed. Columnæ carneæ thickened and rigid. On the endocardium, in the left ventricle, at the apex, and near the mitral valve, small white patches of lymph-like appearance were seen.

Abdomen.—Only a small amount of effusion in cavity. Diaphragm and organs in proper position. *Omentum* normal. *Spleen* diminished in size, very hard. *Pancreas* increased in thickness and weight, cirrhotic. The head was so enlarged that it must have pressed on the common bile-duct. *Gall-bladder* distended and filled with bile; duct pervious. *Liver* diminished to about two-thirds its size, weighing one pound thirteen ounces, left lobe somewhat enlarged, however; firm on pressure, surface unevenly yellow tinged, on section "nutmeg" appearance characteristic. *Stomach* of normal size, in greater curvature mammillated. *Kidneys* normal to naked eye, congested, capsule readily removed. *Suprarenal* capsules thickened, hard, and containing white nodules. *Bladder* and *ureters* normal. On posterior surface of *ureters* a small fibroid tumor. Death was due, no doubt, to cardiac failure. The tricuspid disease was not recognized,—perhaps, as Fothergill has suggested, on account of the amount of blood passing through being too small to develop a murmur; especially so because of the altered mitral and aortic orifices. The tumultuous and

rapid action of the heart may have prevented its detection. That the murmur was not developed on account of the small supply of blood is most probable, for venous pulse and liver pulsation were absent. Disease of the valve permitting aortic regurgitation was not recognized, from the same cause or causes, or it was entirely overlooked. I think in both cases the murmurs were absent, as most careful auscultation was performed.

On microscopical examination the liver presented the characteristics of red atrophy, the kidneys were slightly cirrhotic, the pancreas markedly cirrhotic. Examination of the white patches in the endocardium proved them to be the result of a chronic inflammation, like that of an atheroma.

Dr. FORMAD had found upon examining the pancreas that it was much enlarged. Microscopical examination, however, showed that this enlargement was not due to any neoplasm, but to cirrhosis and marked increase of the interacinous connective tissue. The white patches upon the heart muscle were due to mere thickening of the investing serous membrane. Portions of these patches were slightly eroded. The liver presented a rare condition, —viz., red atrophy. This was most marked around the hepatic venules, where the liver-cells were represented merely by a mass of reddish débris. At the periphery of the lobules the cells were much less affected. These conditions, conjoined with marked cirrhosis, account for the microscopic nutmeg appearance of the organ. The kidneys and the suprarenal capsules were normal.

Dr. BRUEN asked Dr. Formad whether there was any catarrh of the gall-ducts.

Dr. FORMAD replied that he had detected none, the ducts being, however, contracted and obstructed at points.

Dr. MUSSER asked if the patches upon the heart were due to an acute or chronic change.

Dr. FORMAD considered the process chronic.

Dr. HENRY remarked that it was an interesting point in connection with Dr. Formad's report that the lesions due to obstructed circulation were so exclusively confined to the liver. He would naturally expect to find in such a case a marked degree of cyanotic induration of the kidneys.

Differential diagnosis of cerebral embolism and thrombosis in cases of disease of the valves of the heart.

Dr. CHARLES K. MILLS said that some points in Dr. Musser's notes recalled a case which he had recently examined post mortem, and in connection with which he wished to make some remarks on the differential diagnosis of cerebral embolism and thrombosis in cases of valvular disease. The patient was a woman more than sixty years of age. During life he had made the diagnosis of fatty degeneration of the heart, and of aortic, and probably mitral, disease. Dr. Bruen, who saw the case in consultation, concluded that only the aortic valves were diseased. The radial and temporal arteries were markedly atheromatous. She had had three attacks of right-sided paresis or paralysis, dying after the last, which came on suddenly. Post-mortem examination showed extensive calcification of the aortic crescents and degeneration of the heart-walls. The aorta and the cerebral vessels, both large and small, were atheromatous. Centres of softening were found in the motor zone of the cortex of the brain, and also in other regions. Several of the secondary and tertiary branches of the middle cerebral artery were found to be closed, the occlusion being due to disease of the walls of the vessels and the formation of thrombi. In cases like this the diagnosis of embolism is not infrequently made, although the condition found is really thrombosis. He would give the following as good diagnostic points. In favor of thrombosis would be (1) advanced age; (2) evidences of atheroma of vessels; (3) fatty degeneration of heart; (4) a succession of slight attacks of paresis. In favor of embolism would be (1) youth; (2) absence of signs of atheroma; (3) previous history of rheumatism; (4) a comparatively severe attack of paralysis.

He, of course, did not mean to go into a detailed discussion of embolism and thrombosis, but only to call attention to one or two differential features.

Dr. TYSON asked if the urine had been examined for sugar.

Dr. MUSSER, in reply, stated that appropriate tests had been applied, but with negative results.

Dr. TYSON, in explanation of his question, said that we have here hypertrophy of the pancreas,—a condition which Niemeyer, on the supposition that diabetes is due to the presence of an increased amount of pancreatic ferment, says always attends diabetes. This is only one of many instances constantly occurring, which show that such a theory of diabetes is inapplicable,—at least, to most cases.

Dr. HENRY remarked, in reply to Dr. Mills, that his experience had led him to believe that softening of a portion of brain-tissue might occur without complete occlusion of the vessels supplying it. About three years ago he was summoned, early in the morning, to an old gentleman who had awakened to find a loss of power in his left hand. While examining him, the paralysis gradually passed away and returned, and in the course of an hour this intermittent paralysis occurred several times. There was no abnormal cardiac sound, and the kidneys, from previous examination, were known to be healthy. On further study of the case, it was noticed that the paralysis, which continued in this intermittent manner for several weeks, was always at its worst in the early morning, when the

heart was acting most feebly. The superficial arteries were not at all atheromatous, so far as could be decided by the touch; nevertheless, the diagnosis of partially-occluded cerebral vessels, with a slightly-fatty heart, was confidently made. The treatment completely confirmed this theory. A few teaspoonfuls of wine taken before rising in the morning caused an immediate improvement in the morning attacks, and under the continued use of the iodide of potassium in small doses the paralysis disappeared. In about a year a second, more decided attack occurred, this time involving the facial muscles of the left side and, in a slight degree, the left leg. This attack was also recovered from, to a great extent, the only perceptible trace remaining being a certain slowness in pronouncing particular words and a slightly diminished grasp of the left hand. A third attack in June last proved fatal,—about six weeks from its commencement. Its onset was more sudden than either of the two former, but by no means *foudroyant*, and it was accompanied by decided symptoms of cerebral softening. At the same time Dr. Henry had under his care a hospital patient, a woman aged about seventy, whose case was almost identical with the one just outlined, even to the time of the attack and the date of death. An autopsy was obtained, and a softened mass, almost diffluent at its centre, was found occupying the extraventricular portion of the right corpus striatum. The small arteries supplying this portion of the brain (arteriæ corporis striati) were traced from their origin—from the middle cerebral artery—to the softened portion of brain, and, although decidedly atheromatous, were not occluded at any point.

Dr. LONGSTRETH said that he agreed with the remarks of Dr. Mills as to the distinctive points in the differential diagnosis of cerebral embolism and thrombosis, so far as mentioned by that gentleman. He was surprised that one very important differential point had been omitted,—viz., the suddenness of the invasion of the symptoms in embolism in contradistinction to the gradual onset in thrombosis. In cases of embolism, a vegetation becomes detached from the diseased heart-valve, and is carried by the blood-current into one of the cerebral arteries. The immediate effect is to cut off the supply of blood to the vascular area beyond the point where the embolic mass is lodged, and that portion of the brain becomes functionally dead. This process is a rapid one, and, if the area involved corresponds to the motor ganglion, hemiplegia results with a suddenness comparable to that due to cerebral hemorrhage. In thrombosis, on the other hand, the closure of the vessels is effected by a gradual process.

Dr. MILLS could not agree with Dr. Henry if he meant to teach that extensive softening, or, in fact, any softening, of the brain could occur without closure of vessels. Softening of the brain was a process altogether peculiar,—a necrobiosis. In order that the pathological process shall result, vessels somewhere must be *closed*. The vessels may be large, may be of medium size, or may be very small, but occluded they must be before softening can take place. We never find true cerebral softening without complete blocking of some of the vessels going to the part. He even doubted the existence of the so-called inflammatory softening of the brain, except in so far as processes of inflammation might lead to occlusion of vessels. He made this assertion knowing that one school of pathologists held to a different opinion. In the case related by Dr. Henry, vessels were found diseased, and their calibre diminished, but they were patulous. May not some occluded vessels have escaped observation? Even with the greatest care, such as was no doubt taken by Dr. Henry, diseased vessels will sometimes elude us. Numerous nutrient vessels, branches both of the anterior and the middle cerebral vessels, supply the corpora striata. These too are terminal vessels, each supplying a limited area, and not having anastomosing branches. Some of them might readily, in the most careful hands, be broken, torn, displaced, or overlooked. He thought that *hardening* and atrophy of the brain were more likely to result than softening from a poor supply of blood or from a supply of poor blood. He was not without the weight of great authority—that of Hughlings-Jackson, for instance—for such views as he had tried to advance. In connection with a discussion of this kind, the fact that necrobiosis may result from numerous occlusions of cerebral capillaries should be remembered.

Dr. Mills considered the point made by Dr. Longstreth, that paralysis from thrombosis comes on slowly, and that from embolism suddenly, a very good one. He should not have omitted it in his enumeration of differential points. He did not, however, look upon it as absolutely distinctive. Some cases of cerebral thrombosis do at times develop paralytic symptoms suddenly. The degenerative disease of the vessels proceeds slowly, the narrowing of the calibre of the vessel taking place gradually; but the final act of closure, the completion of the blocking, may be practically sudden, and thus give rise to the same shock as occurs in a case of embolism. He might here take occasion to remark that embolism and thrombosis do not *always* induce softening. In a brain examined by Dr. Shakespeare and himself, they had found twenty or more points of closure, but only seven foci of softening in the convolutions. The escape from softening in such cases was due to collateral circulation, which in the cerebral cortex was freer than Duret would admit.

Dr. HENRY agreed entirely with Dr. Mills in regard to the necessity of care in the post-

mortem examination of the brain. His experience as physician to a large hospital had long ago taught him this fact, not only in connection with the brain, but also in regard to every other organ of the body. As concerns the case in question, the centre of cerebral softening having been found, the vessels had been traced from it to their point of origin from the middle cerebral artery. No difficulty whatever had been encountered in making this dissection, the softened brain-tissue being readily and completely removed from the small though rigid blood-vessels. Numerous patches of atheroma were observed in the walls of these vessels, but their lumina were patulous. Dr. Henry thought that a weak heart, in connection with but partially occluded vessels, might lead to cerebral softening. He could on no other theory account for the symptoms of the case to which he had first referred, in which the paralysis was intermittent, in the course of an hour a complete paralysis being followed by an almost complete restoration of power, and this on numerous occasions. Remedies which strengthened the action of the heart, such as wine, caused an immediate improvement in the symptoms; and, conversely, the paralysis was always at its worst when the patient had been the longest deprived of food, and the heart in consequence was acting most feebly,—namely, in the early morning before breakfast. Finally, the symptoms of cerebral softening were completely developed in subsequent attacks. Taking this case in connection with the almost precisely similar one in which an autopsy was obtained, and in which the most careful possible search detected no vascular occlusion, Dr. Henry was so firmly convinced of the possibility of cerebral softening without complete vascular obstruction as not to be shaken in his belief by merely negative evidence.

Dr. LONGSTRETH said that he thought it was supposable that a sudden closure of a large vessel was possible; for example, a cerebral artery where the diseased inner coat suddenly became detached and occluded the calibre of the vessel. Again, a rapidly occurring hemiplegia or unconsciousness in the absence of valvular heart disease might possibly be due to thrombosis, provided the occurrence of a cerebral hemorrhage could be excluded. Cerebral embolism did not occur except in connection with endocardiac or valvular disease, or with atheromatous changes in the large vessels. Sudden hemiplegia did not occur except from cerebral hemorrhage, embolism, or possibly, as in the present discussion, from thrombosis, unless symptoms of other cerebral disease pre-existed; for example, tumors. If heart or vascular disease were absent, embolism could be excluded. In all cases of sudden unconsciousness, therefore, it was a question between cerebral hemorrhage and thrombosis. Several years ago, Dr. Longstreth said, when examining a number of cases of cerebral embolism at the Pennsylvania Hospital, he had consulted the records of medical literature concerning this question, and had not been able to find any well-authenticated cases of cerebral thrombosis. In his personal experience the cases of thrombosis all originated from the sinuses or were of venous character; in these cases, of which he had examined several, the cerebral symptoms were sudden in their onset. Hemiplegia or unconsciousness did not characterize them, although paralysis developed subsequently.

He considered Dr. Mills's language was too weak a characterization of this symptom. The point in regard to the suddenness of the symptom was not only a *good* one, but a *capital* one. Dr. Longstreth said he would like to ask for Dr. Tyson's experience in the matter.

Dr. TYSON agreed with him, but could imagine the possibility of the occurrence of cases such as those mentioned by Dr. Mills.

Dr. LONGSTRETH then asked whether Dr. Tyson knew of any such recorded cases.

Dr. TYSON said that he did not.

Dr. MILLS said that they were both theoretically and practically possible, and he thought that observers had overlooked this fact.

Dr. LONGSTRETH could not see how the condition of vessels could result, such as would lead to complete and sudden closure of a cerebral vessel, without precedent cerebral symptoms having been present, either in their slighter form, as mental feebleness or drowsiness, or in their graver form, such as is due to cerebral syphilis. Until proof of such cases having been observed were adduced, he should continue to doubt their occurrence.

Dr. MILLS said that he had seen more than one patient stricken with paralysis suddenly when he also believed thrombosis was the morbid condition present. He had several times confirmed his diagnosis by autopsies. The case reported by him this evening was one of this kind. Usually, however, prodromata are exhibited in these cases.

Dr. TYSON thought that of course this would be the only proof of Dr. Mills's theory, and hoped that he would at a future time report the cases referred to, upon which he founded the statements that he had made this evening.

Dr. SHAKESPEARE said that, since the field of theory had been entered upon, he could conceive of cases where spasms of the vessels from reflex causes might produce sudden unconsciousness, which would, of course, disappear in due time.

DR. STEVENS, of London, and Dr. Atlee, who have both had an immense experience in vaccination, declare that there has not been the slightest deterioration in the efficacy of the humanized lymph.—*St. Louis Courier of Medicine.*

PHILADELPHIA ACADEMY OF SURGERY.

MEETING OF NOVEMBER 1, 1880.

The President, DR. S. D. GROSS, in the Chair.

(Continued from page 188.)

MASTURBATION IN A FEMALE CHILD OF ONE AND A HALF YEARS.

DR. T. G. MORTON gave the history of a case of apparent masturbation in an infant. The child, now 3½ years of age, a female, had contracted the habit more than two years since. It would sit in a corner and rub its crossed legs together until it exhibited the signs of the venereal orgasm. Treatment by bromides was unavailing, as was the search for a physical cause of the affection. Finally an apparatus was devised consisting of a body-jacket with leather thigh-bands and hooks, so regulated that the child was unable to cross the limbs, and thus was prevented from performing the act. The cause was, in his opinion, cerebral, but he hoped to effect a cure by the apparatus.

Dr. S. D. Gross had seen a similar instance at four years, which passed from notice without a cure being effected by varied treatment.

Dr. S. W. Gross had seen reports of similar cases by Jacobi, of New York, and also in the *Berliner Klinische Wochenschrift*. Some of these had been treated by mechanical appliances to keep the thighs apart.

EXTRACAPSULAR FRACTURE OF THE NECK OF THE FEMUR FOLLOWED BY PERFECT CURE.

Dr. John H. Packard showed a patient who now walked without any apparent limp in his gait, though he had sustained an extracapsular fracture of the femoral neck. The injury was sustained on the 7th of May last, by a fall. The diagnosis was made under ether, and the patient then treated by continuous extension. About the tenth day he was directed to sit up in bed, and to do so for a longer and longer time daily,—the extension being still maintained. Fourteen weeks after the accident, he was at work as usual, at a carriage-factory.

An examination showed a large amount of callus about the seat of fracture. All the motions of the joint were perfect.

CASES OF RETENTION OF URINE COMPLICATED WITH ABSCESS.

Dr. John H. Packard also gave a verbal account of two cases of retention of urine necessitating perineal section. The first patient had, when seen, an abscess of the testicle and stoppage in the flow of urine. The penis and perineum were swollen, and, as it was impossible to introduce a catheter, and there seemed to be danger of rupture of the bladder, Dr. Packard performed perineal section without a guide, and found a greatly distended bladder, which was evacuated by the operation. The operation rendered the patient comfortable, and he is now favorably progressing.

The second case was somewhat similar. The patient had been operated on for stone ten years previously, and presented a perineal cicatrix, which was apparently the cause of the urinary obstruction for which surgical aid had been requested. Extravasation was feared when Dr. Packard saw the case: he was able to draw off a small amount of urine with a small catheter. Very little relief followed this measure, however, and it was observed that there was vivid redness and a puffy condition of the abdomen. On the next day a small rubber guide was passed into the urethra and perineal section performed, when a large abscess was found communicating with a collection of pus between the fasciæ of the abdomen. The bladder could be thoroughly explored with the finger, and seemed merely rugous. No further trouble ensued from retention of urine, but the patient sank and died on the fifth day after the operation, apparently from septicæmia. No autopsy could be had.

SPECIMEN OF FRACTURE AND DISLOCATION OF SPINE.

Dr. R. J. Levis showed a specimen illustrating compression of the spinal cord by the slipping forward of one vertebra on the other, due to tearing of the intervertebral substance and fracture of the processes. The history of the patient is as follows:

Joseph K., aged 40 years, was admitted to the Pennsylvania Hospital on September 30, 1880. He was caught in some way in a coal-slide, but could give no account of the accident, as he spoke no English. On admission, the back was very much contused. A fracture was made out, but not defined, about the first lumbar vertebra. The patient had complete paraplegia from the hips down. Urine was drawn every three to four hours; about a week after admission urine dribbled from the bladder itself. The patient became gradually weaker each day, and died on the night of October 16, from exhaustion.

SECONDARY SARCOMA OCCURRING AFTER AMPUTATION.

Dr. S. W. Gross showed the specimens taken from a child who had died five days previously in convulsions from a metastatic osteoid round-celled sarcomatous growth occupying the temporal region of the skull. The patient had been operated on twelve months previously for periosteal osteoid round-celled sarcoma of the ulna, for which Dr. Gross had amputated at the middle of the arm.

As the case was referred to in the paper on "Sarcomata of the Long Bones," presented at the meeting of the Academy on October 6, 1879,* it was deemed proper to present the specimens at this time.

* Philadelphia Medical Times, July 3, 1880, p. 500.

GUNSHOT WOUND OF THE PENIS PRODUCING URETHRAL FISTULE. By J. EWING MEARS, M.D., SURGEON TO ST. MARY'S HOSPITAL.

P. V., aged 34, was admitted to the wards of St. Mary's Hospital, June 6, 1880, suffering from fistule of the penile portion of the urethra, the result of a gunshot wound of the penis. On admission, he stated that, seven weeks before, he was wounded whilst engaged as an officer of the law in the arrest of a criminal. When he received the wound he was standing in front of his assailant, at a distance of thirty feet, and about ten feet below, the gun having been fired from a window. On examination, it was found that the ball, discharged from a Winchester rifle, had entered the base of the glans penis at a point one-third the distance from the corona to the meatus, and passing through, in a direction slightly oblique, from above downwards, and before backwards, had partially emerged at the under surface just behind the junction of the glans and body; thence, being deflected in its course, it passed backwards to the junction of the penis and scrotum, between the integument and urethra, lacerating the former, entered the septum of the scrotum, and, passing through to the extent of two inches, wounded slightly the epididymis of the right testicle, and emerged at a point two and a half inches from the base of the penis. Continuing its course, it grazed the under surface of the right buttock and passed out through the clothing, clipping out a piece from the lower border of his coat. The hemorrhage following the receipt of the wound was quite copious and soon prostrated him. This was controlled by the attending physician, and sutures were introduced to approximate the edges of the wound of the penis.

On admission to the hospital, an examination was made, and the following conditions were noted. On the upper surface of the glans penis there was an irregular, ragged cicatrix, and on the under surface, at a point just behind the base of the glans, there was an opening one-fourth of an inch in length, leading into the urethra. One-quarter of an inch posteriorly there were two small fistulous tracts, with openings the size of a surgical probe. These communicated with the urethra, being separated from each other by a band of tissue one-fourth of an inch in width. The under surface of the penis was denuded of the integument from the junction of the anterior and middle third to the scrotum, exposing to this extent the fibrous envelope of the corpus spongiosum. On exploring the urethra, a stricture, admitting a small surgical probe, was found three-fourths of an inch posterior to the meatus. During micturition the urine escaped by the fistulous openings.

As a preliminary step to the operation of urethroplasty, which it was decided proper to perform, the stricture was divided and dilated so as to admit a No. 12 bougie, English scale. Following this operation and the efforts at dilatation, a severe attack of cellulitis of the penis occurred. This condition was relieved by treatment, but manifested a tendency to return after each introduction of the instrument. Gradually this was overcome, and an attempt was made to close the fistule by plastic operation. An attack of cellulitis again occurred, and rendered the operation but partially successful, about one-half of the opening being closed. As the patient had suffered severely from the heat and confinement in the hospital, he was advised to return to the country and wait until the approach of cold weather before another attempt at closing the fistule was made.

Gunshot wounds of the penis are of rare occurrence in civil practice, the information given in surgical text-books and treatises with regard to these injuries being largely, if not altogether, derived from military sources. It has been observed that these injuries are rarely uncomplicated, the projectile, either after or before coming in contact with the organ, having wounded the parts which are adjacent. In the "Medical and Surgical History of the War of the Rebellion" (Part II., surgical volume), the author, Dr. Otis, reports three hundred and nine shot injuries of the penis in which it is stated no mention was made by those under whose care the cases occurred of involvement of the urethra. Complications, however, were frequently present, and embraced wounds of the scrotum and testes, perineum and thighs, pelvic walls and viscera. Thirteen and two-tenths per cent. of the cases terminated fatally, the mortality occurring in those in which the complications were of a grave character, involving serious injuries of the femur or of the cavity of the pelvis. Cases of great interest are reported by Drs. S. W. Gross and J. Mason Warren, in which the projectiles became encysted in the cavernous portions of the penis.

Of wounds of the penis involving the urethra, the cases reported in the same volume number one hundred and five. Of this number twenty-two terminated fatally, and, as in the fatal cases above mentioned, the causes of death were due to the grave complications which were present.

Traumatic stricture and urethral fistule resulted in many of the cases reported, the former attending the cicatrization of the wound, owing to its lacerated character. The formation of the latter, as stated, may be caused by extensive loss of substance; partial loss, with urinary infiltration; ulceration due to prolonged maintenance of an instrument in the canal; lodgment of foreign bodies; obstruction of the canal anteriorly to the wound by traumatic stricture. Of the wounds of the urethra, those involving the penile portion are most frequent and at the same time the most intractable; those of the scrotal and perineal portions are rarest and most fre-

quently include the conditions of urinary infiltration.

The resistance offered by the structures of the penis to the projectile, and the remarkable deviations in its course as a result, are well illustrated in the case above reported. It seems almost impossible for a ball having the propelling force of the one which caused the wound in this case to be deflected at a right angle from its course after it had passed nearly through the organ, then traverse other resisting structures, and finally pass clear of the body. It is also to be remembered that the projectile was discharged from a point higher than that occupied by the patient, and, presuming the organ to have been in a flaccid condition and depending, it renders the course taken by it still more remarkable.

In fistules caused by shot lacerations plastic operations are more difficult in performance and less successful in result, owing to the loss of tissue forming the walls of the urethra and adjacent to it. Also, the existence of the stricture complicates the case, and, unless entirely removed by preliminary operation, renders success impossible.

REVIEWS AND BOOK NOTICES.

A TREATISE ON DIPHTHERIA. By A. JACOBI, M.D. New York, William Wood & Co. 1880.

The limits allotted in this journal to the notices of books, and the multitude of works requiring notice, forbid our giving that detailed attention to the present volume which it deserves. We have read almost every page of it with pleasure and, generally, with instruction. It is divided into nine chapters, which occupy about two hundred and fifty pages of very clear print. The portion of the book to which most physicians, when pressed with the responsibility of some severe cases of the disorder, will first turn, concerns the treatment of the disease. The measures usually adopted by the doctor will be found clearly stated, as also the treatment recommended by various other authorities.

Dr. Jacobi seems to rely chiefly upon the free use of alcohol from the beginning of the disorder, with tincture of chloride of iron and chlorate of potassium, and the employment of local treatment. He calls attention to the fact, not always remembered, that the chlorate is an irritant poison in over-doses, and shows that cases of diphtheria have been killed by it. We think he entirely overestimates the value of small doses of the chlorate. It is clearly established, to our thinking, that the chlorate is nearly free from general action upon the system, and that it is beneficial in scarlet fever, diphtheria, etc., only by its local action. The method in which the chloride is employed is peculiar in the frequency as well as the largeness of the dose. The doctor exhibits the chloride every half-hour, hoping for good from its local influence upon the inflamed mucous membrane. The direct local treatment employed is not severe: the avoidance of any procedure apt to wound the inflamed surface; the free and frequent use of carbolic acid upon the membrane, aided by the use of steam, etc., in the individual case. In some cases, where the application can be strictly limited to a part, a mixture of equal parts of glycerin and carbolic acid is employed as a caustic. In nasal diphtheria free disinfection of the nasal chambers by hourly injections into the nose of carbolic acid water (gr. iv to ʒi) is strongly recommended.

For further details we must refer our readers to the book itself, which we cannot too highly commend. Every part of it shows the possession by the author of an intimate acquaintance with the literature of the disease as well as with the disease itself. The style is excellent,—clear, forcible, and concise. We have never read any article or work upon diphtheria so satisfactory as the one upon whose completion we congratulate Dr. Jacobi with the sincerest of good wishes.

OPHTHALMIC AND OTIC MEMORANDA. By D. B. ST. JOHN ROOSA, M.D., and EDWARD T. ELY, M.D. Revised Edition. Small 12mo. Pp. 298.

We have rarely seen so small a book embracing so much. It possesses, in addition, a long train in the shape of a copious glossary and index. Evidently, the labor of preparing such a work was too much for *one* author. He prudently withheld from the attempt until a second came to his assistance. Notwithstanding the authors' avowal that the book is not designed to meet the wants of those seeking *primary* knowledge in the specialties of which it treats, it will of necessity be classified with ponies and coaches. We have had a surplusage of such books in general medicine and surgery, and are sorry to see the specialties invaded by them.

THE COMPEND OF ANATOMY. By JOHN B. ROBERTS, A.M., M.D. Philadelphia, C. C. Roberts & Co.

This is a good book of its kind, but we should like to see something more sterling from its author. Dr. Roberts is a man of promise, and should not waste his time in writing compends for "preparing students for examination." Such work has never given genuine reputation to any teacher who has gone into it, and it has never been of much use to humanity.

HYGIENE AND SANATIVE MEASURES FOR CHRONIC CATARRHAL INFLAMMATION OF THE NOSE, THROAT, AND EYES. Part I. By THOMAS F. RUMBOLD, M.D. St. Louis, George O. Rumbold & Co., 1880. Pp. 166.

Dr. Rumbold informs the reader, in the

preface of this manual, that he had been early convinced that the successful management of catarrh depended upon the faithful observance of the laws of health by the patients themselves. The book is an outcome of the necessity of such observance. It appears to be a summary of rules designed for the laity, and, as such, needs no special introduction to the profession. To spread the knowledge that a book exists for the physician to recommend to sufferers from catarrh is evidently the main object Dr. Rumbold has in seeking a notice at our hands. We can say, in a word, that the rules are good and are well worth following by all.

MEDICAL HERESIES HISTORICALLY CONSIDERED. A SERIES OF CRITICAL ESSAYS ON THE ORIGIN AND EVOLUTION OF SECTARIAN MEDICINE. By GONZALVO C. SMYTHE, A.M., M.D. Philadelphia, Presley Blakiston, 1012 Walnut Street.

Professor Smythe has succeeded in writing a brief, clear, and interesting sketch of the evolution of medical eccentricities, and of modern homœopathy, its facts and fallacies. We commend the work, a brochure of 225 pages, to those desiring information on the subject. We sincerely wish the laity could be induced to peruse it.

GLEANINGS FROM EXCHANGES.

OPIUM-POISONING SUCCESSFULLY TREATED BY ATROPIA HYPODERMICALLY.—Dr. J. W. Breedlove (*Virginia Med. Monthly*, December, 1880) was called to a case where eight to ten grains of morphia had been taken at a single dose an hour and a half previously. He at once gave an emetic dose of salt and mustard (both being at hand), followed by copious draughts of warm water, with the twofold object of diluting any unabsorbed poison and facilitating emesis. In about fifteen minutes, no vomiting having occurred, he gave about thirty grains of ipecac, and this, with the aid of titillation of the fauces, produced free vomiting in about five minutes more. The peripatetic and perturbating plan was then adopted, as also the free use of strong coffee, and cold water applied to the face and head. An hour later, at 8 P.M., the narcotism growing deeper and the symptoms becoming more alarming, he injected hypodermically 1-96th of a grain of atropia; in half an hour 1-48th of a grain was administered, and at 9.30 and 11 P.M. this dose was repeated, the use of strong coffee and cold affusions being continued at the same time, the patient being assured that her safety depended on her not giving way to the desire to sleep, thereby securing to some extent her co-operation. At 4.30 A.M. the symptoms were much improved, it requiring but little continued effort to attract her attention. At 8 A.M. the patient had so far improved that the doctor acceded to her request to lie down and take short naps. Not until after the administration of the last dose of atropia did the pupil begin to manifest its mydriatic influence. From this time improvement was progressive; but convalescence was slow, owing to extreme nervous prostration.

COMPARISON BETWEEN THE THERAPEUTIC VALUE OF FREE PHOSPHORUS AND THE HYPOPHOSPHITE SALTS.—Dr. J. Ashburton Thompson, well known for his researches on the action and use of free phosphorus, writes to the *British Medical Journal* of October 30 to controvert in part the views of Dr. Frederick Churchill as to the high therapeutic value of the hypophosphites as a form of phosphorus. He says, "Should the former be substituted for the latter under the impression that their action is identical, disappointment will be experienced in the effects produced in many cases, but more especially in many cases of neuralgia, in cases of insomnia the result of nervous exhaustion (in which it is desirable to avoid the use of narcotics if immediate relief can be procured by other kinds of medicine, as it may be procured by free phosphorus), and in all cases of imminent death under the typhoid condition."

Having tried the hypophosphite salts, Dr. Thompson has now almost entirely relinquished them in favor of hypophosphorous acid. This acid, of which the dose is one, two, or three drops for infants, five drops for adolescents, and ten drops for adults, given every four hours, Dr. Thompson has been brought to regard as a valuable means of treating all cases of disordered nutrition, whether the result of chronic or acute febrile disease. It may be administered in a variety of combinations, and he has been led to prefer it to the alkaline salts because he has found its effects more promptly manifested, productive of more permanent results, and withal more generally useful.

CHLORATE OF POTASSIUM IN THE HEMORRHAGIC DIATHESIS.—Dr. Alexander Harkin (*British Medical Journal*, vol. ii., 1880, p. 700) continues to extol the virtues of this drug. He gives several cases in which its success in restraining hemorrhage of different kinds was decided. In one of these, hemorrhage from the mucous membrane of the rectum, he prescribed rest and a mixture of one ounce of chlorate of potassium and twenty ounces of water: dose, one ounce three times daily. After the first day the patient began to improve, and by the third day every trace of the disease had disappeared. In a case of hæmophilia with habitual and often virulent epistaxis the same treatment was employed, only with the addition of one drachm of the tincture of the chloride of iron per dose. A fortnight later the patient was well. In a case of renal hemorrhage the same combination proved effectual after many remedies,

and even the tincture of iron alone, had proved without avail. Two cases of purpura hæmorrhagica, due to low diet and a scorbutic condition, are also reported by Dr. Harkin as cured by a similar treatment. Cases of menorrhagia, hemorrhage from the womb, hæmatemesis, and hæmoptysis were all treated successfully with the chlorate; and, though Dr. Harkin may be too sanguine in his advocacy of this remedy, it certainly deserves to be remembered among our means of controlling hemorrhage.

APPARENT DEATH AS A RESULT OF ASPHYXIA.—Medical journals occasionally inform us of wonderful resuscitations brought about by the persistent use of artificial respiration; but two, lately reported to the Academy of Sciences, Paris, by Dr. Fort, Professor of Anatomy in the Ecole Pratique, are especially noteworthy, and teach us to persevere in any efforts we may make to bring back signs of life. In the case of a child three years old, who had already been placed in the shroud, Dr. Fort commenced the use of artificial respiration three and a half hours after apparent death. After four and a half hours of steady work the child was brought back to life. The other case was that of a drowned man, who had been under water for twelve minutes before the body was recovered. Artificial respiration was commenced an hour afterwards, and after being kept up for hours the man was restored to life. The report of the meeting of the Academy does not give the details of the child's case before the appearance of the apparent death, nor what prompted the doctor to commence the artificial respiration. —*Medical Press and Circular.*

REPREHENSIBLE PRACTICE.—A correspondent of the *Druggist's Circular* writes as follows: "A few weeks since, a young man suffering from toothache asked a druggist for something that could relieve him. The druggist dissolved eighty grains of chloral hydrate in one ounce of syrup of ginger, gave one drachm of it, undiluted, to the patient, and wrote on the label, 'A teaspoonful every half-hour till relieved.' The patient had six doses as directed, when he was taken with convulsions, palpitation of the heart, and finally unconsciousness, attributed by regular physicians, then called in, to an overdose of chloral. The consequence was that the patient was sick for two weeks from the effects of the dosing, and claims that the druggist did wrong and should pay the doctors' bill. The druggist claims that he was not wrong, and should do the same thing again. Is the druggist culpable or not?"

The editor replies at once, and plainly, that the druggist is guilty of criminal imprudence; and we are convinced that our readers will agree with him in this opinion.

ESSENCE OF WINTER-GREEN IN PURULENT CYSTITIS.—The essence of winter-green, more used in perfumery than in pharmacy, is, according to the *Journal de Médecine et de Chirurgie pratiques*, used by M. Périer, of the St. Antoine Hospital, in the treatment of purulent cystitis. It is a powerful antiseptic, of a penetrating but not disagreeable odor, and non-irritant. Though its price is high, this does not form a bar to its use, as it is given in very small doses. The essence of winter-green is procured from the *Gaultheria procumbens*, a North American shrub. Chemically, the essence is called salicylate of methylene, or methylsalicylic ether: it is only slightly soluble in water. Dr. Périer employs the following combination: essence of winter-green, six grammes; tincture of quillaya saponaria, thirty grammes; water, one litre. This forms an excellent fluid for injecting into the bladder, for washing wounds, and for some simple dressings.—*Medical Press and Circular.*

TREATMENT OF CHOLERAIC DIARRHŒA BY THE HYPODERMIC INJECTION OF MORPHIA.—Mr. W. Hardman says (*Lancet*, vol. ii., 1880, p. 538) that choleraic diarrhœa can always be immediately stopped by the administration of morphia hypodermically. If severe diarrhœa have persisted over two hours in spite of the administration of morphia and opium, hypodermic injection of morphia should be at once resorted to. The treatment is absolutely free from danger, even if albuminuria or temporary suppression of urine be present. In severe cases obstinate vomiting may persist for twelve to forty-eight hours after the purging is stopped; but this need not occasion any anxiety: it is the purging that kills.

STATISTICS RELATING TO THE SEAT OF CHANCROUS AND CHANCROID ULCERS IN WOMEN.—Dr. Razumoff tabulated 1374 cases, treated in one of the Moscow hospitals, as follows: ulcers were seated on the uterine cervix in 117 cases (8.5 per cent.), 13 of this number being chancres with subsequent general infection; 664 on large and small labia; 272 at the vaginal entrance and between the mystiform caruncles; 176 on the posterior commissure; 60 on the perineum; 55 about the anus; 26 on the anterior commissure; 3 in different parts of the vagina, and 3 on the meatus urinarius.—*Meditz. Obozrenie*, p. 360, May, 1880; *New York Medical Record.*

TREATMENT OF EXCESSIVE PERSPIRATION OF HANDS AND FEET BY FARADIC CURRENT. —As this symptom is due to disordered functional activity of peripheral nerves, Dr. Gordon was led to study this particular condition, with the following results. The tactile and faradic sensitiveness of these parts is diminished; their temperature is lower. Systematic faradization controls the perspiration, and corresponding to the effects of treatment the above two conditions are relieved.—*Vratch.*, 1880, No. 20; *New York Medical Record.*

ATROPIA AS A SUBSTITUTE FOR MORPHIA FOR THE RELIEF OF PAIN.—Dr. Wrightson, of Newark, New Jersey, reports a case of cholera

morbus in which the intense pain was instantly relieved by one-eightieth grain of atropia hypodermically, after the failure of thirty minims of Magendie's solution of morphia. The patient was on board of a pleasure-yacht, and the atropia, Magendie's solution, and a hypodermic syringe composed the doctor's armamentarium. — *Maryland Medical Journal*, September 1; *New York Medical Record.*

MISCELLANY.

FILARIA DISEASE.—The parasitic theory of the causation of elephantiasis has been subjected during the last two years to a considerable amount of criticism, favorable and unfavorable. It has been accepted by some, and those the best acquainted with tropical disease, as supplying the key to what before was mysterious and a sealed book; others, again, have suspended judgment in the matter, considering the evidence not yet complete; while a third section, including eminent pathologists, such as the late Dr. Tilbury Fox, deny it altogether. In the eighteenth issue of the valuable half-yearly medical reports of the Chinese Imperial Maritime Customs, just received from Shanghai, Dr. Manson, of Amoy, who is well known as one of the most earnest workers in this field of pathology, gives a very striking account of his further researches into the question. Perhaps the most remarkable of his results has been the discovery of the periodicity observed by the embryo of Filaria Bancrofti in the blood.

He observes that it had always seemed strange to him that the filaria sanguinis hominis had escaped observation in the blood until Lewis found it there in 1872: "One would think there were hundreds of workers in India, and in different parts of the tropical world, who must have searched the human blood in the aggregate thousands of times; and, notwithstanding this, the parasite, which in some places is present in every tenth individual, was overlooked, or never found, for so many years." The explanation of this Dr. Manson now offers. Most workers with the microscope pursue their investigations during the hours when the light is good,—*i. e.*, during the day. Dr. Manson shows that this is the wrong time to search for filariæ. Finding that different results were obtained by his assistants according as they worked during the day or after dark, he made a systematic examination every four hours of several patients, with the view of ascertaining if this periodicity was maintained in every case. Examination of the patients in this way showed that, unless there is some disturbance, as fever, interfering with the physiological rhythm of the body, filaria embryos invariably begin to appear in the circulation at sunset, and their numbers gradually increase till about midnight; during the morning they become fewer by degrees, and by nine or ten o'clock in the forenoon it is a very rare thing to find one in the blood. Until sunset they appear to have completely deserted the circulation, but with the evening they come again, to disappear in the morning, and so on with the utmost regularity every day, and from day to day. The circle is completed every twenty-four hours, and there are no longer spells of absence than from morning to evening. For the meaning of this Dr. Manson thinks we have not far to look: "The nocturnal habits of filaria sanguinis hominis are adapted to the nocturnal habits of the mosquito, its intermediary host, and form only another of the many wonderful instances of adaptation so constantly met with in nature."

The conclusions at which Dr. Manson arrives, after his study of the subject, are the following, which deserve serious attention. The parent filariæ live in the lymphatics. This is proved by their young and ova being found there even when absent from the blood. They do not live in the glands, but in the lymphatic trunks on the distal side of the glands. (Lewis and Bancroft found them in tissues some distance from any glands.) They are oviparous. The eggs are carried by the lymph-current to the glands; and, being too large to pass ($\frac{1}{50}'' \times \frac{1}{100}''$), they are arrested there till hatched. After hatching, the free embryo passes along the lymph-vessels and enters the general circulation. Resting in some organ during the day, it circulates with the blood during the night; whence the mosquito abstracts it and acts as its intermediary host. In certain cases the ova or embryos produce obstruction of the lymph-circulation through the glands, either directly by their size, or indirectly by causing inflammation. If the obstruction be partial, varicosity of glands and of afferent lymphatics results; but by means of the anastomoses the lymph-circulation is continued, carrying the embryos with it into the blood. Lymph-scrotum, or chyluria, or varicose groin-glands, with hæmatozoa, are therefore the symptoms of partial obstruction of the lymphatics. If the obstruction be complete, one or other of two things happens. *a.* The accumulating lymph so distends the vessels that they rupture, and a lymphorrhagia results, which is more or less permanent. In this case, the lymph does not quite stagnate; but, being able to circulate, though in a retrograde manner, it remains fluid. The symptoms of this form of obstruction are, therefore, lymphorrhagia from scrotum or leg, varicose glands, and filaria-embryos in glands, and perhaps in discharged lymph, *but none in the blood.* *b.* If the lymphatics fail to rupture, there is a complete stasis of lymph, and excessive accumulation in the tissues on the distal side of the glands; solidification of the glands and

tissues, and elephantiasis, result. No embryos are found in the blood, as none can pass the glands; and the parent worm or worms probably die choked, so to speak, by the stagnant and organizing lymph and their own young. Consequently, in pure elephantiasis, as a rule, no embryos can possibly be found in the blood or in the lymph of the glands.—*British Medical Journal.*

MEDICAL NIGHT-SERVICE IN PARIS.—The statistics of the Medical-Night Service in Paris for the period from July 1 to September 30, 1880, show 1570 visits to have been paid by the physicians. The table of diseases treated is interesting reading, and should be instructive to the newly-fledged practitioner who is well posted in the diagnosis and treatment of progressive pernicious anæmia or yellow fever, but is a little nervous at fear of being unequal to some sudden "emergency case." The commonest cases which the Night Medical Service was called upon to treat were as follows: Gastro-intestinal troubles, 156 cases; "neuroses," 93; accouchements, 90; hemorrhages from external or internal causes, 89; cerebral affections, —paralysis, 87; angina and laryngitis, 79; cholerine, 76; wounds and contusions, 71; hepatic, nephritic, and lead colic, 67; eclampsia-convulsions, 65; neuralgia, 63. In 51 cases death had occurred before the arrival of the physician. The average number of visits per night was 17; 36 per cent. of the patients were men, 49 per cent. were women, and 15 per cent. were children under three years of age.

RECTAL ALIMENTATION.—At the meeting of the French Association for the Advancement of Science at Rheims, M. Catillon read a paper on "Alimentation by the Rectum," in which he stated that he had fed two dogs during two months with injections of eggs. The first, which had eggs only, lived with difficulty, with considerable loss of weight; the other, in which the injected eggs were mixed with glycerin and pepsin, lived in an apparently normal manner, weight and temperature being constant. After thirty-seven days, the pepsin having been stopped, the animal lost weight, and the temperature fell from 102° Fahr. to 99° Fahr. It is therefore apparent that, in order that nutrition should be properly performed by the intestine, digestive ferments must be associated with the food, —that is to say, they must be transformed into peptones.—*Medical Press and Circular.*

SULPHATE OF ZINC IN DIGESTIVE DERANGEMENTS.—According to Niewodniczanki, this salt may be advantageously employed in place of nitrate of silver in affections of the digestive organs (*La Presse Médicale Belge*). The sulphate of zinc is less easily decomposed, is better tolerated, and seems very active. It has been employed with success in acute and chronic affections of the stomach and in gastralgia; the addition of codeia or opium to the sulphate of zinc is unnecessary, for the salt is itself calmative. It is given in doses of 6 to 10 centigrammes a day. It is also useful in diarrhœa.—*Medical Press and Circular.*

DR. CARL SEILER, the well-known laryngologist, of this city, will spend some time this winter, beginning January 1, at the St. James Hotel, Jacksonville, Florida. Physicians who have cases going to Florida requiring topical treatment of the larynx can refer them to Dr. Seiler with entire confidence that they will receive the best attention.

FORGOTTEN BY DEATH.—Old Prof. Chevreul, aged ninety-five, has just completed that course of forty lectures on chemistry for which he was so widely advertised a few months ago. As his father lived to be one hundred and five, the old gentleman may yet lecture the century out.

DR. THOMAS WOOD, of Cincinnati, died November 21, from blood-poisoning received by attending with chapped hands the wounded in the recent railroad accident.

THE *Virginia Medical Monthly* will be published as a daily bulletin during the sitting of the American Medical Association at Richmond, Virginia, May 3–7, 1881.

DR. L. WOLFF contributes to the *Pharmacist* a paper on "Pharmacocatagraphologia," which expressive word is supposed to mean the art of writing prescriptions.

THE recent hurricane in Jamaica damaged or destroyed some 10,000 cinchona-trees and over 400,000 seedlings.

THE Medical Committee of Middlesex Hospital report, after long trial, that Chian turpentine is useless in cancer.

SIR BENJAMIN BRODIE, son of the famous surgeon, professor of chemistry at Oxford, and author of a number of scientific works, has just died.

ST. MARY'S HOSPITAL, of this city, has opened an eye and ear department.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 12 TO DECEMBER 25, 1880.

BAILY, J. C., MAJOR AND SURGEON.—Granted leave of absence for one month, with permission to leave the limits of the Division and apply for one month's extension. S. O. 188, Division of the Pacific and Department of California, December 13, 1880.

HEIZMANN, CHARLES L., CAPTAIN AND ASSISTANT-SURGEON.—The extension of his leave of absence granted him October 30, 1880, from A. G. O., still further extended two months. S. O. 268, A. G. O., December 18, 1880.

KANE, J. J., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Cummings, and assigned to duty as Post-Surgeon at Fort Union, New Mexico. S. O. 153, District of New Mexico, December 13, 1880.

BENHAM, R. B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Snelling, Minn., and assigned to duty at Fort A. Lincoln, D. T. S. O. 165, Department of Dakota, December 8, 1880.